

# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)  
Field: WELD COUNTY (KERR MCGEE) Well: NRC 4N-32HZ  
Facility: SEC.08-T1N-R67W Wellbore: NRC 4N-32HZ PWB

Plot reference wellpath is NRC 4N-32HZ (PERMIT REV-1) PWP

True vertical depths are referenced to Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB)	North Reference: True north
Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB) to Mean Sea Level: 5078 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: willjef02 on 1/16/2014

## Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.08-T1N-R67W			3165100.027	1265676.420	40°03'40.190"N	104°54'36.529"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)	3604.16	-3248.84	3161829.419	1269258.764	40°04'15.805"N	104°55'18.293"W
Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB) to Mud line (At Slot: SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08))					5078ft	
Mean Sea Level to Mud line (At Slot: SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08))					0ft	
Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB) to Mean Sea Level					5078ft	

## Survey Program

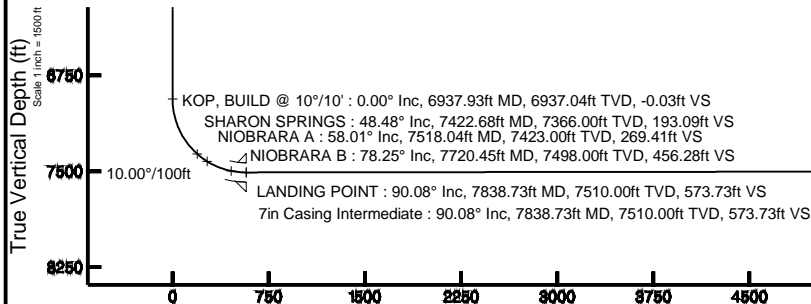
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7838.73	NavitTrak	NavitTrak (MAGCORR,IFR)		NRC 4N-32HZ PWB
7838.73	18590.48	NavitTrak	NavitTrak (MAGCORR,IFR)		NRC 4N-32HZ PWB

## Well Profile Data

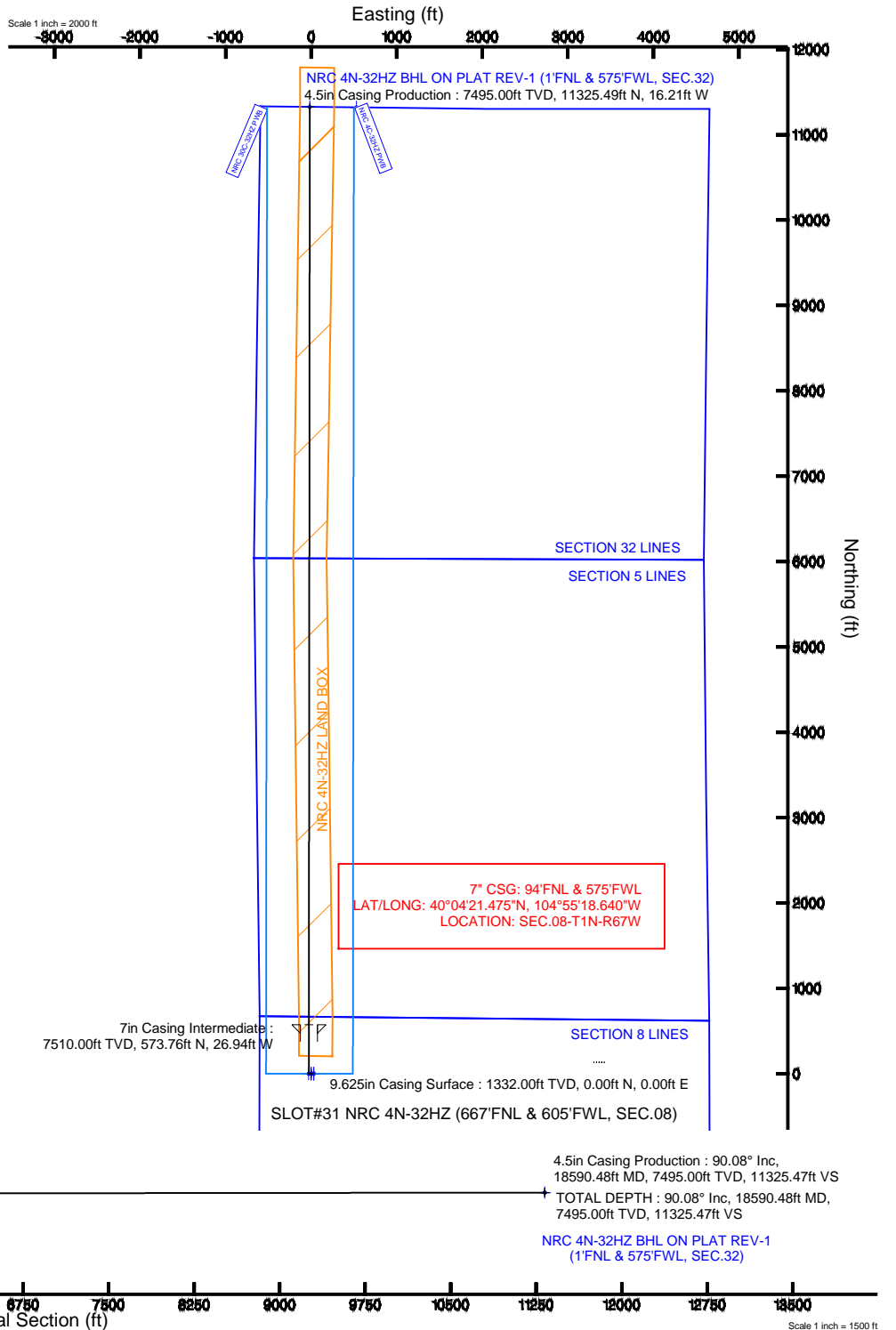
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
TIE-ON	17.00	0.000	270.000	17.00	0.00	0.00	0.00	0.00
BEGI NUDGE	1450.00	0.000	270.000	1450.00	0.00	0.00	0.00	0.00
END NUDGE	1700.00	5.000	270.000	1699.68	0.00	-10.90	2.00	-0.01
BEGIN DROP	1765.57	5.000	270.000	1765.00	0.00	-16.62	0.00	-0.02
END DROP	2015.57	0.000	0.057	2014.68	0.00	-27.52	2.00	-0.03
KOP, BUILD @ 10°/10'	6937.93	0.000	0.057	6937.04	0.00	-27.52	0.00	-0.03
LANDING POINT	7838.73	90.080	0.057	7510.00	573.76	-26.94	10.00	573.73
TOTAL DEPTH	18590.48	90.080	0.057	7495.00	11325.49	-16.21	0.00	11325.47

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SECTION 32 LINES		100.00	0.40	-29.93	3161799.49	1269258.97	40°04'15.809"N	104°55'18.678"W
NRC 4N-32HZ BHL ON PLAT REV-1 (1'FNL & 575'FWL, SEC.32)	18590.48	7495.00	11325.49	-16.21	3161739.36	1280583.46	40°06'07.726"N	104°55'18.502"W
NRC 4N-32HZ LAND BOX		7550.00	0.00	0.00	3161829.42	1269258.76	40°04'15.805"N	104°55'18.293"W
NRC SECTION 5 LINES		7552.00	133.59	3304.74	3165133.08	1269413.90	40°04'17.123"N	104°54'36.794"W
NRC SECTION 8 LINES		7552.00	133.59	3304.74	3165133.08	1269413.90	40°04'17.123"N	104°54'36.794"W



Azimuth 0.06° with reference 0.00 N, 0.00 E





# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-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	Wilsjef02
Scale	0.999962	Report Generated	1/16/2014 at 10:21:03
Convergence at slot	n/a	Database/Source file	WellArchitectDB/NRC_4N-32HZ_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	3604.16	-3246.84	3161829.42	1269258.76	40°04'15.805"N	104°55'18.293"W
Facility Reference Pt			3165100.03	1265676.42	40°03'40.190"N	104°54'36.529"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#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB) to Facility Vertical Datum	5078.00ft
Horizontal Reference Pt	Slot	Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB) to Mean Sea Level	5078.00ft
Vertical Reference Pt	Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB)	Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB) to Mud Line at Slot (SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08))	5078.00ft
MD Reference Pt	Rig on SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.06°



# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-R67W		

## WELLPATH DATA (200 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	270.000	0.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
17.00	0.000	270.000	17.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	TIE-ON
117.00†	0.000	270.000	117.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
217.00†	0.000	270.000	217.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
317.00†	0.000	270.000	317.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
417.00†	0.000	270.000	417.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
517.00†	0.000	270.000	517.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
617.00†	0.000	270.000	617.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
717.00†	0.000	270.000	717.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
817.00†	0.000	270.000	817.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
917.00†	0.000	270.000	917.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
1017.00†	0.000	270.000	1017.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
1117.00†	0.000	270.000	1117.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
1217.00†	0.000	270.000	1217.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
1282.00†	0.000	270.000	1282.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	FOX HILLS MARKER
1317.00†	0.000	270.000	1317.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
1417.00†	0.000	270.000	1417.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	
1450.00	0.000	270.000	1450.00	0.00	0.00	0.00	40°04'15.805"N	104°55'18.293"W	0.00	BEGI NUDGE
1517.00†	1.340	270.000	1516.99	0.00	0.00	-0.78	40°04'15.805"N	104°55'18.303"W	2.00	
1617.00†	3.340	270.000	1616.91	0.00	0.00	-4.87	40°04'15.805"N	104°55'18.356"W	2.00	
1700.00	5.000	270.000	1699.68	-0.01	0.00	-10.90	40°04'15.805"N	104°55'18.433"W	2.00	END NUDGE
1717.00†	5.000	270.000	1716.62	-0.01	0.00	-12.38	40°04'15.805"N	104°55'18.452"W	0.00	
1765.57	5.000	270.000	1765.00	-0.02	0.00	-16.62	40°04'15.805"N	104°55'18.507"W	0.00	BEGIN DROP
1817.00†	3.971	270.000	1816.28	-0.02	0.00	-20.64	40°04'15.805"N	104°55'18.558"W	2.00	
1917.00†	1.971	270.000	1916.14	-0.03	0.00	-25.82	40°04'15.805"N	104°55'18.625"W	2.00	
2015.57	0.000	0.057	2014.68	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	2.00	END DROP
2017.00†	0.000	0.057	2016.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2117.00†	0.000	0.057	2116.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2217.00†	0.000	0.057	2216.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2317.00†	0.000	0.057	2316.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2417.00†	0.000	0.057	2416.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2517.00†	0.000	0.057	2516.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2617.00†	0.000	0.057	2616.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2717.00†	0.000	0.057	2716.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2817.00†	0.000	0.057	2816.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
2917.00†	0.000	0.057	2916.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3017.00†	0.000	0.057	3016.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3117.00†	0.000	0.057	3116.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3217.00†	0.000	0.057	3216.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3317.00†	0.000	0.057	3316.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3417.00†	0.000	0.057	3416.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3517.00†	0.000	0.057	3516.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3617.00†	0.000	0.057	3616.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3717.00†	0.000	0.057	3716.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
3817.00†	0.000	0.057	3816.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	



# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-R67W		

## WELLPATH DATA (200 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3917.00†	0.000	0.057	3916.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4017.00†	0.000	0.057	4016.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4117.00†	0.000	0.057	4116.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4217.00†	0.000	0.057	4216.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4262.88†	0.000	0.057	4262.00	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	PARKMAN
4317.00†	0.000	0.057	4316.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4417.00†	0.000	0.057	4416.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4517.00†	0.000	0.057	4516.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4597.88†	0.000	0.057	4597.00	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	SUSSEX
4617.00†	0.000	0.057	4616.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4717.00†	0.000	0.057	4716.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4817.00†	0.000	0.057	4816.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
4917.00†	0.000	0.057	4916.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5017.00†	0.000	0.057	5016.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5117.00†	0.000	0.057	5116.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5217.00†	0.000	0.057	5216.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5317.00†	0.000	0.057	5316.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5417.00†	0.000	0.057	5416.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5517.00†	0.000	0.057	5516.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5617.00†	0.000	0.057	5616.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5717.00†	0.000	0.057	5716.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5817.00†	0.000	0.057	5816.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
5917.00†	0.000	0.057	5916.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6017.00†	0.000	0.057	6016.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6117.00†	0.000	0.057	6116.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6217.00†	0.000	0.057	6216.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6317.00†	0.000	0.057	6316.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6417.00†	0.000	0.057	6416.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6517.00†	0.000	0.057	6516.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6617.00†	0.000	0.057	6616.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6717.00†	0.000	0.057	6716.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6817.00†	0.000	0.057	6816.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6917.00†	0.000	0.057	6916.12	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	
6937.93	0.000	0.057	6937.04	-0.03	0.00	-27.52	40°04'15.805"N	104°55'18.647"W	0.00	KOP, BUILD @ 10°/10'
7017.00†	7.907	0.057	7015.87	5.42	5.45	-27.51	40°04'15.859"N	104°55'18.647"W	10.00	
7117.00†	17.907	0.057	7113.21	27.73	27.76	-27.49	40°04'16.079"N	104°55'18.647"W	10.00	
7217.00†	27.907	0.057	7205.21	66.60	66.63	-27.45	40°04'16.463"N	104°55'18.646"W	10.00	
7317.00†	37.907	0.057	7289.06	120.86	120.89	-27.40	40°04'17.000"N	104°55'18.645"W	10.00	
7417.00†	47.907	0.057	7362.21	188.86	188.89	-27.33	40°04'17.672"N	104°55'18.645"W	10.00	
7422.68†	48.475	0.057	7366.00	193.09	193.12	-27.32	40°04'17.713"N	104°55'18.644"W	10.00	SHARON SPRINGS
7517.00†	57.907	0.057	7422.45	268.52	268.55	-27.25	40°04'18.459"N	104°55'18.644"W	10.00	
7518.04†	58.012	0.057	7423.00	269.41	269.43	-27.25	40°04'18.468"N	104°55'18.643"W	10.00	NIOBRARA A
7617.00†	67.907	0.057	7467.93	357.44	357.46	-27.16	40°04'19.338"N	104°55'18.642"W	10.00	
7717.00†	77.907	0.057	7497.29	452.90	452.93	-27.07	40°04'20.281"N	104°55'18.641"W	10.00	
7720.45†	78.252	0.057	7498.00	456.28	456.30	-27.06	40°04'20.314"N	104°55'18.641"W	10.00	NIOBRARA B



# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-R67W		

## WELLPATH DATA (200 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7817.00†	87.907	0.057	7509.62	552.01	552.04	-26.97	40°04'21.260"N	104°55'18.640"W	10.00	
7838.73	90.080	0.057	7510.00	573.73	573.76	-26.94	40°04'21.475"N	104°55'18.640"W	10.00	LANDING POINT
7917.00†	90.080	0.057	7509.89	652.00	652.03	-26.87	40°04'22.248"N	104°55'18.639"W	0.00	
8017.00†	90.080	0.057	7509.75	752.00	752.03	-26.77	40°04'23.237"N	104°55'18.637"W	0.00	
8117.00†	90.080	0.057	7509.61	852.00	852.03	-26.67	40°04'24.225"N	104°55'18.636"W	0.00	
8217.00†	90.080	0.057	7509.47	952.00	952.03	-26.57	40°04'25.213"N	104°55'18.635"W	0.00	
8317.00†	90.080	0.057	7509.33	1052.00	1052.03	-26.47	40°04'26.201"N	104°55'18.633"W	0.00	
8417.00†	90.080	0.057	7509.19	1152.00	1152.03	-26.37	40°04'27.190"N	104°55'18.632"W	0.00	
8517.00†	90.080	0.057	7509.05	1252.00	1252.03	-26.27	40°04'28.178"N	104°55'18.631"W	0.00	
8617.00†	90.080	0.057	7508.91	1352.00	1352.03	-26.17	40°04'29.166"N	104°55'18.630"W	0.00	
8717.00†	90.080	0.057	7508.77	1452.00	1452.03	-26.07	40°04'30.154"N	104°55'18.628"W	0.00	
8817.00†	90.080	0.057	7508.64	1552.00	1552.03	-25.97	40°04'31.142"N	104°55'18.627"W	0.00	
8917.00†	90.080	0.057	7508.50	1652.00	1652.03	-25.87	40°04'32.131"N	104°55'18.626"W	0.00	
9017.00†	90.080	0.057	7508.36	1752.00	1752.03	-25.77	40°04'33.119"N	104°55'18.624"W	0.00	
9117.00†	90.080	0.057	7508.22	1852.00	1852.03	-25.67	40°04'34.107"N	104°55'18.623"W	0.00	
9217.00†	90.080	0.057	7508.08	1952.00	1952.03	-25.57	40°04'35.095"N	104°55'18.622"W	0.00	
9317.00†	90.080	0.057	7507.94	2052.00	2052.03	-25.47	40°04'36.084"N	104°55'18.621"W	0.00	
9417.00†	90.080	0.057	7507.80	2152.00	2152.03	-25.37	40°04'37.072"N	104°55'18.619"W	0.00	
9517.00†	90.080	0.057	7507.66	2252.00	2252.03	-25.27	40°04'38.060"N	104°55'18.618"W	0.00	
9617.00†	90.080	0.057	7507.52	2352.00	2352.03	-25.17	40°04'39.048"N	104°55'18.617"W	0.00	
9717.00†	90.080	0.057	7507.38	2452.00	2452.03	-25.07	40°04'40.036"N	104°55'18.615"W	0.00	
9817.00†	90.080	0.057	7507.24	2552.00	2552.03	-24.97	40°04'41.025"N	104°55'18.614"W	0.00	
9917.00†	90.080	0.057	7507.10	2652.00	2652.03	-24.87	40°04'42.013"N	104°55'18.613"W	0.00	
10017.00†	90.080	0.057	7506.96	2752.00	2752.03	-24.77	40°04'43.001"N	104°55'18.612"W	0.00	
10117.00†	90.080	0.057	7506.82	2852.00	2852.03	-24.67	40°04'43.989"N	104°55'18.610"W	0.00	
10217.00†	90.080	0.057	7506.68	2952.00	2952.03	-24.57	40°04'44.978"N	104°55'18.609"W	0.00	
10317.00†	90.080	0.057	7506.54	3052.00	3052.03	-24.47	40°04'45.966"N	104°55'18.608"W	0.00	
10417.00†	90.080	0.057	7506.40	3152.00	3152.03	-24.37	40°04'46.954"N	104°55'18.607"W	0.00	
10517.00†	90.080	0.057	7506.26	3252.00	3252.03	-24.27	40°04'47.942"N	104°55'18.605"W	0.00	
10617.00†	90.080	0.057	7506.12	3352.00	3352.03	-24.17	40°04'48.930"N	104°55'18.604"W	0.00	
10717.00†	90.080	0.057	7505.98	3452.00	3452.03	-24.07	40°04'49.919"N	104°55'18.603"W	0.00	
10817.00†	90.080	0.057	7505.84	3552.00	3552.03	-23.97	40°04'50.907"N	104°55'18.601"W	0.00	
10917.00†	90.080	0.057	7505.71	3652.00	3652.03	-23.87	40°04'51.895"N	104°55'18.600"W	0.00	
11017.00†	90.080	0.057	7505.57	3752.00	3752.03	-23.77	40°04'52.883"N	104°55'18.599"W	0.00	
11117.00†	90.080	0.057	7505.43	3852.00	3852.03	-23.67	40°04'53.871"N	104°55'18.598"W	0.00	
11217.00†	90.080	0.057	7505.29	3952.00	3952.03	-23.57	40°04'54.860"N	104°55'18.596"W	0.00	
11317.00†	90.080	0.057	7505.15	4052.00	4052.03	-23.47	40°04'55.848"N	104°55'18.595"W	0.00	
11417.00†	90.080	0.057	7505.01	4152.00	4152.03	-23.37	40°04'56.836"N	104°55'18.594"W	0.00	
11517.00†	90.080	0.057	7504.87	4252.00	4252.03	-23.27	40°04'57.824"N	104°55'18.592"W	0.00	
11617.00†	90.080	0.057	7504.73	4352.00	4352.03	-23.17	40°04'58.813"N	104°55'18.591"W	0.00	
11717.00†	90.080	0.057	7504.59	4452.00	4452.03	-23.07	40°04'59.801"N	104°55'18.590"W	0.00	
11817.00†	90.080	0.057	7504.45	4552.00	4552.02	-22.97	40°05'00.789"N	104°55'18.589"W	0.00	
11917.00†	90.080	0.057	7504.31	4652.00	4652.02	-22.87	40°05'01.777"N	104°55'18.587"W	0.00	
12017.00†	90.080	0.057	7504.17	4752.00	4752.02	-22.77	40°05'02.765"N	104°55'18.586"W	0.00	
12117.00†	90.080	0.057	7504.03	4852.00	4852.02	-22.67	40°05'03.754"N	104°55'18.585"W	0.00	



# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-R67W		

## WELLPATH DATA (200 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12217.00†	90.080	0.057	7503.89	4952.00	4952.02	-22.57	40°05'04.742"N	104°55'18.583"W	0.00	
12317.00†	90.080	0.057	7503.75	5052.00	5052.02	-22.47	40°05'05.730"N	104°55'18.582"W	0.00	
12417.00†	90.080	0.057	7503.61	5152.00	5152.02	-22.37	40°05'06.718"N	104°55'18.581"W	0.00	
12517.00†	90.080	0.057	7503.47	5252.00	5252.02	-22.27	40°05'07.707"N	104°55'18.580"W	0.00	
12617.00†	90.080	0.057	7503.33	5352.00	5352.02	-22.17	40°05'08.695"N	104°55'18.578"W	0.00	
12717.00†	90.080	0.057	7503.19	5452.00	5452.02	-22.07	40°05'09.683"N	104°55'18.577"W	0.00	
12817.00†	90.080	0.057	7503.05	5552.00	5552.02	-21.97	40°05'10.671"N	104°55'18.576"W	0.00	
12917.00†	90.080	0.057	7502.92	5652.00	5652.02	-21.87	40°05'11.659"N	104°55'18.574"W	0.00	
13017.00†	90.080	0.057	7502.78	5752.00	5752.02	-21.77	40°05'12.648"N	104°55'18.573"W	0.00	
13117.00†	90.080	0.057	7502.64	5852.00	5852.02	-21.67	40°05'13.636"N	104°55'18.572"W	0.00	
13217.00†	90.080	0.057	7502.50	5952.00	5952.02	-21.57	40°05'14.624"N	104°55'18.571"W	0.00	
13317.00†	90.080	0.057	7502.36	6052.00	6052.02	-21.47	40°05'15.612"N	104°55'18.569"W	0.00	
13417.00†	90.080	0.057	7502.22	6152.00	6152.02	-21.37	40°05'16.600"N	104°55'18.568"W	0.00	
13517.00†	90.080	0.057	7502.08	6252.00	6252.02	-21.28	40°05'17.589"N	104°55'18.567"W	0.00	
13617.00†	90.080	0.057	7501.94	6352.00	6352.02	-21.18	40°05'18.577"N	104°55'18.565"W	0.00	
13717.00†	90.080	0.057	7501.80	6452.00	6452.02	-21.08	40°05'19.565"N	104°55'18.564"W	0.00	
13817.00†	90.080	0.057	7501.66	6552.00	6552.02	-20.98	40°05'20.553"N	104°55'18.563"W	0.00	
13917.00†	90.080	0.057	7501.52	6652.00	6652.02	-20.88	40°05'21.542"N	104°55'18.562"W	0.00	
14017.00†	90.080	0.057	7501.38	6752.00	6752.02	-20.78	40°05'22.530"N	104°55'18.560"W	0.00	
14117.00†	90.080	0.057	7501.24	6852.00	6852.02	-20.68	40°05'23.518"N	104°55'18.559"W	0.00	
14217.00†	90.080	0.057	7501.10	6952.00	6952.02	-20.58	40°05'24.506"N	104°55'18.558"W	0.00	
14317.00†	90.080	0.057	7500.96	7052.00	7052.02	-20.48	40°05'25.494"N	104°55'18.556"W	0.00	
14417.00†	90.080	0.057	7500.82	7152.00	7152.02	-20.38	40°05'26.483"N	104°55'18.555"W	0.00	
14517.00†	90.080	0.057	7500.68	7252.00	7252.02	-20.28	40°05'27.471"N	104°55'18.554"W	0.00	
14617.00†	90.080	0.057	7500.54	7352.00	7352.02	-20.18	40°05'28.459"N	104°55'18.553"W	0.00	
14717.00†	90.080	0.057	7500.40	7452.00	7452.02	-20.08	40°05'29.447"N	104°55'18.551"W	0.00	
14817.00†	90.080	0.057	7500.26	7552.00	7552.02	-19.98	40°05'30.435"N	104°55'18.550"W	0.00	
14917.00†	90.080	0.057	7500.12	7652.00	7652.02	-19.88	40°05'31.424"N	104°55'18.549"W	0.00	
15017.00†	90.080	0.057	7499.99	7752.00	7752.02	-19.78	40°05'32.412"N	104°55'18.547"W	0.00	
15117.00†	90.080	0.057	7499.85	7852.00	7852.02	-19.68	40°05'33.400"N	104°55'18.546"W	0.00	
15217.00†	90.080	0.057	7499.71	7952.00	7952.02	-19.58	40°05'34.388"N	104°55'18.545"W	0.00	
15317.00†	90.080	0.057	7499.57	8052.00	8052.02	-19.48	40°05'35.377"N	104°55'18.544"W	0.00	
15417.00†	90.080	0.057	7499.43	8152.00	8152.02	-19.38	40°05'36.365"N	104°55'18.542"W	0.00	
15517.00†	90.080	0.057	7499.29	8252.00	8252.02	-19.28	40°05'37.353"N	104°55'18.541"W	0.00	
15617.00†	90.080	0.057	7499.15	8352.00	8352.02	-19.18	40°05'38.341"N	104°55'18.540"W	0.00	
15717.00†	90.080	0.057	7499.01	8452.00	8452.02	-19.08	40°05'39.329"N	104°55'18.538"W	0.00	
15817.00†	90.080	0.057	7498.87	8552.00	8552.02	-18.98	40°05'40.318"N	104°55'18.537"W	0.00	
15917.00†	90.080	0.057	7498.73	8652.00	8652.02	-18.88	40°05'41.306"N	104°55'18.536"W	0.00	
16017.00†	90.080	0.057	7498.59	8752.00	8752.02	-18.78	40°05'42.294"N	104°55'18.535"W	0.00	
16117.00†	90.080	0.057	7498.45	8852.00	8852.02	-18.68	40°05'43.282"N	104°55'18.533"W	0.00	
16217.00†	90.080	0.057	7498.31	8952.00	8952.02	-18.58	40°05'44.271"N	104°55'18.532"W	0.00	
16317.00†	90.080	0.057	7498.17	9052.00	9052.02	-18.48	40°05'45.259"N	104°55'18.531"W	0.00	
16417.00†	90.080	0.057	7498.03	9152.00	9152.02	-18.38	40°05'46.247"N	104°55'18.530"W	0.00	
16517.00†	90.080	0.057	7497.89	9252.00	9252.02	-18.28	40°05'47.235"N	104°55'18.528"W	0.00	
16617.00†	90.080	0.057	7497.75	9352.00	9352.02	-18.18	40°05'48.223"N	104°55'18.527"W	0.00	



# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-R67W		

## WELLPATH DATA (200 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16717.00†	90.080	0.057	7497.61	9452.00	9452.02	-18.08	40°05'49.212"N	104°55'18.526"W	0.00	
16817.00†	90.080	0.057	7497.47	9551.99	9552.02	-17.98	40°05'50.200"N	104°55'18.524"W	0.00	
16917.00†	90.080	0.057	7497.33	9651.99	9652.02	-17.88	40°05'51.188"N	104°55'18.523"W	0.00	
17017.00†	90.080	0.057	7497.20	9751.99	9752.02	-17.78	40°05'52.176"N	104°55'18.522"W	0.00	
17117.00†	90.080	0.057	7497.06	9851.99	9852.02	-17.68	40°05'53.164"N	104°55'18.521"W	0.00	
17217.00†	90.080	0.057	7496.92	9951.99	9952.02	-17.58	40°05'54.153"N	104°55'18.519"W	0.00	
17317.00†	90.080	0.057	7496.78	10051.99	10052.02	-17.48	40°05'55.141"N	104°55'18.518"W	0.00	
17417.00†	90.080	0.057	7496.64	10151.99	10152.02	-17.38	40°05'56.129"N	104°55'18.517"W	0.00	
17517.00†	90.080	0.057	7496.50	10251.99	10252.02	-17.28	40°05'57.117"N	104°55'18.515"W	0.00	
17617.00†	90.080	0.057	7496.36	10351.99	10352.02	-17.18	40°05'58.106"N	104°55'18.514"W	0.00	
17717.00†	90.080	0.057	7496.22	10451.99	10452.02	-17.08	40°05'59.094"N	104°55'18.513"W	0.00	
17817.00†	90.080	0.057	7496.08	10551.99	10552.02	-16.98	40°06'00.082"N	104°55'18.512"W	0.00	
17917.00†	90.080	0.057	7495.94	10651.99	10652.02	-16.88	40°06'01.070"N	104°55'18.510"W	0.00	
18017.00†	90.080	0.057	7495.80	10751.99	10752.02	-16.78	40°06'02.058"N	104°55'18.509"W	0.00	
18117.00†	90.080	0.057	7495.66	10851.99	10852.02	-16.68	40°06'03.047"N	104°55'18.508"W	0.00	
18217.00†	90.080	0.057	7495.52	10951.99	10952.02	-16.58	40°06'04.035"N	104°55'18.506"W	0.00	
18317.00†	90.080	0.057	7495.38	11051.99	11052.02	-16.48	40°06'05.023"N	104°55'18.505"W	0.00	
18417.00†	90.080	0.057	7495.24	11151.99	11152.02	-16.38	40°06'06.011"N	104°55'18.504"W	0.00	
18517.00†	90.080	0.057	7495.10	11251.99	11252.02	-16.28	40°06'06.999"N	104°55'18.503"W	0.00	
18590.48	90.080	0.057	7495.00 <sup>1</sup>	11325.47	11325.49	-16.21	40°06'07.726"N	104°55'18.502"W	0.00	TOTAL DEPTH

## HOLE & CASING SECTIONS - Ref Wellbore: NRC 4N-32HZ PWB Ref Wellpath: NRC 4N-32HZ (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	1332.00	1315.00	17.00	1332.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1332.00	1315.00	17.00	1332.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1332.00	7838.73	6506.73	1332.00	7510.00	0.00	0.00	573.76	-26.94
7in Casing Intermediate	17.00	7838.73	7821.73	17.00	7510.00	0.00	0.00	573.76	-26.94
6.125in Open Hole	7838.73	18590.48	10751.75	7510.00	7495.00	573.76	-26.94	11325.49	-16.21
4.5in Casing Production	17.00	18590.48	18573.48	17.00	7495.00	0.00	0.00	11325.49	-16.21



# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-R67W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SECTION 32 LINES		100.00	0.40	-29.93	3161799.49	1269258.97	40°04'15.809"N	104°55'18.678"W	polygon
1) NRC 4N-32HZ BHL ON PLAT REV-1 (1'FNL & 575'FWL, SEC.32)	18590.48	7495.00	11325.49	-16.21	3161739.36	1280583.46	40°06'07.726"N	104°55'18.502"W	point
NRC 4N-32HZ LAND BOX		7550.00	0.00	0.00	3161829.42	1269258.76	40°04'15.805"N	104°55'18.293"W	polygon
NRC SECTION 5 LINES		7552.00	133.59	3304.74	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W	polygon
NRC SECTION 8 LINES		7552.00	133.59	3304.74	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W	polygon

## SURVEY PROGRAM - Ref Wellbore: NRC 4N-32HZ PWB Ref Wellpath: NRC 4N-32HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7838.73	NaviTrak (MAGCORR,IFR)		NRC 4N-32HZ PWB
7838.73	18590.48	NaviTrak (MAGCORR,IFR)		NRC 4N-32HZ PWB



# Planned Wellpath Report

NRC 4N-32HZ (PERMIT REV-1) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 NRC 4N-32HZ (667'FNL & 605'FWL, SEC.08)
Area	COLORADO	Well	NRC 4N-32HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 4N-32HZ PWB
Facility	SEC.08-T1N-R67W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1282.00	0.000	270.000	1282.00	FOX HILLS MARKER
4262.88	0.000	0.057	4262.00	PARKMAN
4597.88	0.000	0.057	4597.00	SUSSEX
7422.68	48.475	0.057	7366.00	SHARON SPRINGS
7518.04	58.012	0.057	7423.00	NIOBRARA A
7720.45	78.252	0.057	7498.00	NIOBRARA B