

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)
Field: WELD COUNTY (KERR MCGEE) Well: NRC 28N-5HZ
Facility: SEC.08-T1N-R67W Wellbore: NRC 28N-5HZ PWB

Plot reference wellpath is NRC 28N-5HZ (PERMIT REV-1) PWP

True vertical depths are referenced to Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB)	North Reference: True north
Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB) to Mean Sea Level: 5026 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wlljg02 on 12/20/2013

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)
SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)	3737.32	57.92	3165133.082	1269413.896
Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB) to Mud line (At Slot: SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08))				5026ft
Mean Sea Level to Mud line (At Slot: SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08))				0ft
Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB) to Mean Sea Level				5026ft

Survey Program

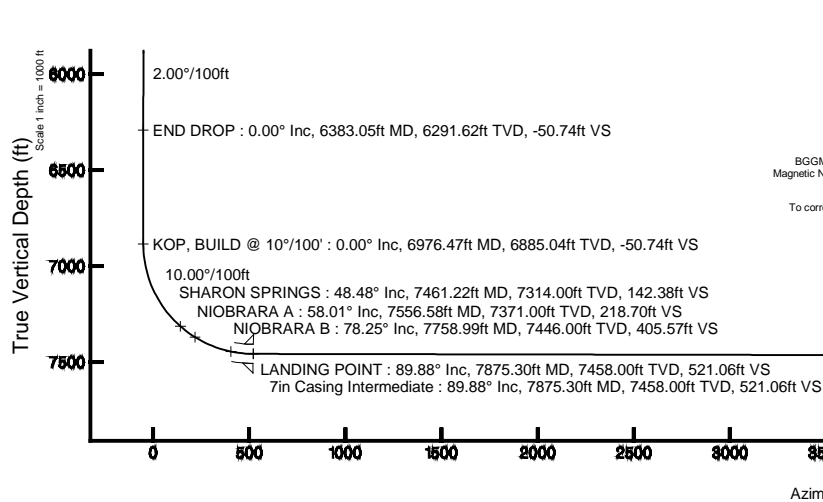
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7875.30	NaviTrak	NaviTrak (Standard)		NRC 28N-5HZ PWB
7875.30	12800.42	NaviTrak	NaviTrak (Standard)		NRC 28N-5HZ PWB

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	266.145	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1400.00	0.000	266.145	1400.00	0.00	0.00	0.00	0.00
END NUDGE	2000.00	12.000	266.145	1995.62	-4.21	-62.46	2.00	-3.48
BEGIN DROP	5783.05	12.000	266.145	5696.00	-57.09	-847.22	0.00	-47.25
END DROP	6383.05	0.000	359.335	6291.62	-61.30	-909.68	2.00	-50.74
KOP, BUILD @ 10°/100'	6976.47	0.000	359.335	6885.04	-61.30	-909.68	0.00	-50.74
LANDING POINT	7875.30	89.884	359.335	7458.00	510.46	-916.32	10.00	521.06
TOTAL DEPTH	12800.42	89.884	359.335	7468.00	5435.23	-973.46	0.00	5446.16

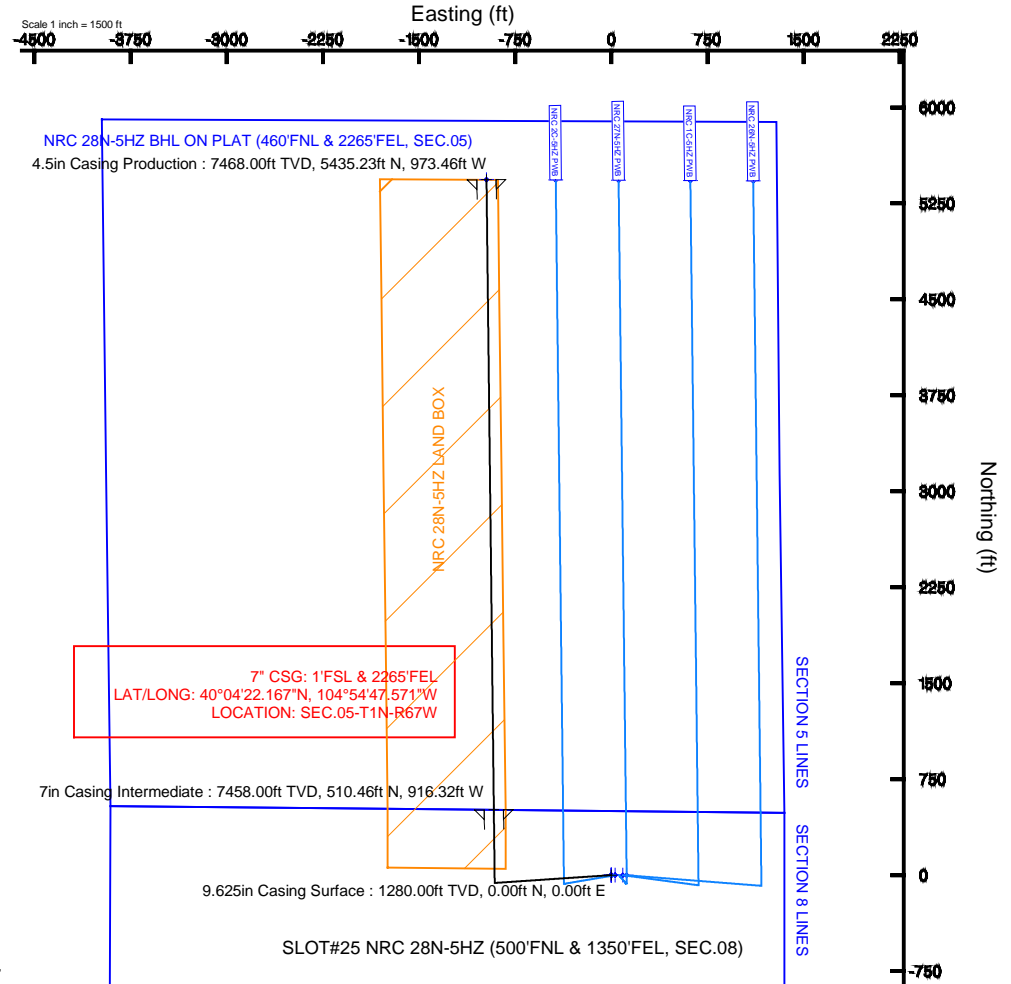
Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
NRC 28N-5HZ BHL ON PLAT (460'FNL & 2265'FEL, SEC.05)	12800.42	7468.00	5435.23	-973.46	3164123.52	1274842.31	40°05'10.830"N	104°54'48.308"W
NRC 28N-5HZ LAND BOX		7500.00	0.00	0.00	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W
NRC SECTION 5 LINES		7500.00	0.00	0.00	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W
NRC SECTION 8 LINES		7500.00	0.00	0.00	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W



BGGM (1945.0 to 2015.0) Dip: 66.66° Field: 52600.3 nT
Magnetic North is 8.61 degrees East of True North (at 12/19/2013)

To correct azimuth from Magnetic to True add 8.61 degrees



4.5in Casing Production : 89.88° Inc, 12800.42ft MD, 7468.00ft TVD, 5446.16ft VS
TOTAL DEPTH : 89.88° Inc, 12800.42ft MD, 7468.00ft TVD, 5446.16ft VS
NRC 28N-5HZ BHL ON PLAT (460'FNL & 2265'FEL, SEC.05)



Planned Wellpath Report

NRC 28N-5HZ (PERMIT REV-1) PWP

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)
Area	COLORADO	Well	NRC 28N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 28N-5HZ 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	12/20/2013 at 09:24:16
Convergence at slot	n/a	Database/Source file	WellArchitectDB/NRC_28N-5HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	3737.32	57.92	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"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#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB) to Facility Vertical Datum	5026.00ft
Horizontal Reference Pt	Slot	Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB) to Mean Sea Level	5026.00ft
Vertical Reference Pt	Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB)	Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB) to Mud Line at Slot (SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08))	5026.00ft
MD Reference Pt	Rig on SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.33°



Planned Wellpath Report

NRC 28N-5HZ (PERMIT REV-1) PWP

Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)
Area	COLORADO	Well	NRC 28N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 28N-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (141 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	266.145	0.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
17.00	0.000	266.145	17.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	TIE-ON
117.00†	0.000	266.145	117.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
217.00†	0.000	266.145	217.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
317.00†	0.000	266.145	317.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
417.00†	0.000	266.145	417.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
517.00†	0.000	266.145	517.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
617.00†	0.000	266.145	617.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
717.00†	0.000	266.145	717.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
817.00†	0.000	266.145	817.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
917.00†	0.000	266.145	917.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
1017.00†	0.000	266.145	1017.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
1117.00†	0.000	266.145	1117.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
1217.00†	0.000	266.145	1217.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
1317.00†	0.000	266.145	1317.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	
1400.00	0.000	266.145	1400.00	0.00	0.00	0.00	40°04'17.123"N	104°54'35.784"W	0.00	BEGIN NUDGE
1417.00†	0.340	266.145	1417.00	0.00	0.00	-0.05	40°04'17.123"N	104°54'35.785"W	2.00	
1517.00†	2.340	266.145	1516.97	-0.13	-0.16	-2.38	40°04'17.121"N	104°54'35.815"W	2.00	
1617.00†	4.340	266.145	1616.79	-0.46	-0.55	-8.20	40°04'17.118"N	104°54'35.889"W	2.00	
1717.00†	6.340	266.145	1716.35	-0.97	-1.18	-17.48	40°04'17.111"N	104°54'36.009"W	2.00	
1817.00†	8.340	266.145	1815.53	-1.69	-2.04	-30.23	40°04'17.103"N	104°54'36.173"W	2.00	
1917.00†	10.340	266.145	1914.20	-2.59	-3.13	-46.42	40°04'17.092"N	104°54'36.381"W	2.00	
2000.00	12.000	266.145	1995.62	-3.48	-4.21	-62.46	40°04'17.081"N	104°54'36.587"W	2.00	END NUDGE
2017.00†	12.000	266.145	2012.25	-3.68	-4.45	-65.99	40°04'17.079"N	104°54'36.633"W	0.00	
2117.00†	12.000	266.145	2110.07	-4.84	-5.84	-86.73	40°04'17.065"N	104°54'36.900"W	0.00	
2217.00†	12.000	266.145	2207.88	-5.99	-7.24	-107.48	40°04'17.051"N	104°54'37.166"W	0.00	
2317.00†	12.000	266.145	2305.70	-7.15	-8.64	-128.22	40°04'17.038"N	104°54'37.433"W	0.00	
2417.00†	12.000	266.145	2403.51	-8.31	-10.04	-148.96	40°04'17.024"N	104°54'37.700"W	0.00	
2517.00†	12.000	266.145	2501.33	-9.47	-11.44	-169.71	40°04'17.010"N	104°54'37.967"W	0.00	
2617.00†	12.000	266.145	2599.14	-10.62	-12.83	-190.45	40°04'16.996"N	104°54'38.234"W	0.00	
2717.00†	12.000	266.145	2696.95	-11.78	-14.23	-211.20	40°04'16.982"N	104°54'38.501"W	0.00	
2817.00†	12.000	266.145	2794.77	-12.94	-15.63	-231.94	40°04'16.969"N	104°54'38.767"W	0.00	
2917.00†	12.000	266.145	2892.58	-14.09	-17.03	-252.68	40°04'16.955"N	104°54'39.034"W	0.00	
3017.00†	12.000	266.145	2990.40	-15.25	-18.42	-273.43	40°04'16.941"N	104°54'39.301"W	0.00	
3117.00†	12.000	266.145	3088.21	-16.41	-19.82	-294.17	40°04'16.927"N	104°54'39.568"W	0.00	
3217.00†	12.000	266.145	3186.03	-17.56	-21.22	-314.92	40°04'16.913"N	104°54'39.835"W	0.00	
3317.00†	12.000	266.145	3283.84	-18.72	-22.62	-335.66	40°04'16.899"N	104°54'40.102"W	0.00	
3417.00†	12.000	266.145	3381.66	-19.88	-24.02	-356.41	40°04'16.886"N	104°54'40.368"W	0.00	
3517.00†	12.000	266.145	3479.47	-21.03	-25.41	-377.15	40°04'16.872"N	104°54'40.635"W	0.00	
3617.00†	12.000	266.145	3577.29	-22.19	-26.81	-397.89	40°04'16.858"N	104°54'40.902"W	0.00	
3717.00†	12.000	266.145	3675.10	-23.35	-28.21	-418.64	40°04'16.844"N	104°54'41.169"W	0.00	
3817.00†	12.000	266.145	3772.92	-24.51	-29.61	-439.38	40°04'16.830"N	104°54'41.436"W	0.00	
3917.00†	12.000	266.145	3870.73	-25.66	-31.01	-460.13	40°04'16.817"N	104°54'41.703"W	0.00	
4017.00†	12.000	266.145	3968.55	-26.82	-32.40	-480.87	40°04'16.803"N	104°54'41.969"W	0.00	
4117.00†	12.000	266.145	4066.36	-27.98	-33.80	-501.61	40°04'16.789"N	104°54'42.236"W	0.00	



Planned Wellpath Report

NRC 28N-5HZ (PERMIT REV-1) PWP

Page 3 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)
Area	COLORADO	Well	NRC 28N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 28N-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	12.000	266.145	4164.18	-29.13	-35.20	-522.36	40°04'16.775"N	104°54'42.503"W	0.00	
4263.85†	12.000	266.145	4210.00	-29.68	-35.85	-532.08	40°04'16.769"N	104°54'42.628"W	0.00	PARKMAN
4317.00†	12.000	266.145	4261.99	-30.29	-36.60	-543.10	40°04'16.761"N	104°54'42.770"W	0.00	
4417.00†	12.000	266.145	4359.81	-31.45	-37.99	-563.85	40°04'16.747"N	104°54'43.037"W	0.00	
4517.00†	12.000	266.145	4457.62	-32.60	-39.39	-584.59	40°04'16.734"N	104°54'43.304"W	0.00	
4606.33†	12.000	266.145	4545.00	-33.64	-40.64	-603.12	40°04'16.721"N	104°54'43.542"W	0.00	SUSSEX
4617.00†	12.000	266.145	4555.44	-33.76	-40.79	-605.33	40°04'16.720"N	104°54'43.570"W	0.00	
4717.00†	12.000	266.145	4653.25	-34.92	-42.19	-626.08	40°04'16.706"N	104°54'43.837"W	0.00	
4817.00†	12.000	266.145	4751.06	-36.08	-43.59	-646.82	40°04'16.692"N	104°54'44.104"W	0.00	
4917.00†	12.000	266.145	4848.88	-37.23	-44.98	-667.57	40°04'16.678"N	104°54'44.371"W	0.00	
5017.00†	12.000	266.145	4946.69	-38.39	-46.38	-688.31	40°04'16.665"N	104°54'44.638"W	0.00	
5117.00†	12.000	266.145	5044.51	-39.55	-47.78	-709.06	40°04'16.651"N	104°54'44.905"W	0.00	
5217.00†	12.000	266.145	5142.32	-40.70	-49.18	-729.80	40°04'16.637"N	104°54'45.171"W	0.00	
5317.00†	12.000	266.145	5240.14	-41.86	-50.57	-750.54	40°04'16.623"N	104°54'45.438"W	0.00	
5417.00†	12.000	266.145	5337.95	-43.02	-51.97	-771.29	40°04'16.609"N	104°54'45.705"W	0.00	
5517.00†	12.000	266.145	5435.77	-44.17	-53.37	-792.03	40°04'16.595"N	104°54'45.972"W	0.00	
5617.00†	12.000	266.145	5533.58	-45.33	-54.77	-812.78	40°04'16.582"N	104°54'46.239"W	0.00	
5717.00†	12.000	266.145	5631.40	-46.49	-56.17	-833.52	40°04'16.568"N	104°54'46.506"W	0.00	
5783.05	12.000	266.145	5696.00	-47.25	-57.09	-847.22	40°04'16.559"N	104°54'46.682"W	0.00	BEGIN DROP
5817.00†	11.321	266.145	5729.25	-47.63	-57.55	-854.07	40°04'16.554"N	104°54'46.770"W	2.00	
5917.00†	9.321	266.145	5827.63	-48.63	-58.76	-871.94	40°04'16.542"N	104°54'47.000"W	2.00	
6017.00†	7.321	266.145	5926.57	-49.44	-59.73	-886.38	40°04'16.533"N	104°54'47.186"W	2.00	
6117.00†	5.321	266.145	6025.96	-50.05	-60.47	-897.36	40°04'16.525"N	104°54'47.327"W	2.00	
6217.00†	3.321	266.145	6125.67	-50.47	-60.97	-904.88	40°04'16.520"N	104°54'47.424"W	2.00	
6317.00†	1.321	266.145	6225.58	-50.69	-61.25	-908.92	40°04'16.518"N	104°54'47.475"W	2.00	
6383.05	0.000	359.335	6291.62	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	2.00	END DROP
6417.00†	0.000	359.335	6325.58	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	0.00	
6517.00†	0.000	359.335	6425.58	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	0.00	
6617.00†	0.000	359.335	6525.58	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	0.00	
6717.00†	0.000	359.335	6625.58	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	0.00	
6817.00†	0.000	359.335	6725.58	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	0.00	
6917.00†	0.000	359.335	6825.58	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	0.00	
6976.47	0.000	359.335	6885.04	-50.74	-61.30	-909.68	40°04'16.517"N	104°54'47.485"W	0.00	KOP, BUILD @ 10°/100'
7017.00†	4.053	359.335	6925.54	-49.30	-59.86	-909.70	40°04'16.531"N	104°54'47.485"W	10.00	
7117.00†	14.053	359.335	7024.17	-33.59	-44.15	-909.88	40°04'16.687"N	104°54'47.488"W	10.00	
7217.00†	24.053	359.335	7118.57	-0.98	-11.55	-910.26	40°04'17.009"N	104°54'47.493"W	10.00	
7317.00†	34.053	359.335	7205.88	47.52	36.95	-910.82	40°04'17.488"N	104°54'47.500"W	10.00	
7417.00†	44.053	359.335	7283.44	110.44	99.87	-911.55	40°04'18.110"N	104°54'47.509"W	10.00	
7461.22†	48.475	359.335	7314.00	142.38	131.81	-911.92	40°04'18.425"N	104°54'47.514"W	10.00	SHARON SPRINGS
7517.00†	54.053	359.335	7348.89	185.88	175.30	-912.43	40°04'18.855"N	104°54'47.521"W	10.00	
7556.58†	58.012	359.335	7371.00	218.70	208.12	-912.81	40°04'19.179"N	104°54'47.526"W	10.00	NIOBRARA A
7617.00†	64.053	359.335	7400.25	271.53	260.95	-913.42	40°04'19.702"N	104°54'47.533"W	10.00	
7717.00†	74.053	359.335	7435.95	364.81	354.22	-914.50	40°04'20.623"N	104°54'47.547"W	10.00	
7758.99†	78.253	359.335	7446.00	405.57	394.98	-914.98	40°04'21.026"N	104°54'47.554"W	10.00	NIOBRARA B
7817.00†	84.053	359.335	7454.92	462.86	452.27	-915.64	40°04'21.592"N	104°54'47.562"W	10.00	



Planned Wellpath Report

NRC 28N-5HZ (PERMIT REV-1) PWP

Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)
Area	COLORADO	Well	NRC 28N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 28N-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7875.30	89.884	359.335	7458.00	521.06	510.46	-916.32	40°04'22.167"N	104°54'47.571"W	10.00	LANDING POINT
7917.00†	89.884	359.335	7458.08	562.76	552.15	-916.80	40°04'22.579"N	104°54'47.577"W	0.00	
8017.00†	89.884	359.335	7458.29	662.76	652.15	-917.96	40°04'23.567"N	104°54'47.592"W	0.00	
8117.00†	89.884	359.335	7458.49	762.76	752.14	-919.12	40°04'24.556"N	104°54'47.607"W	0.00	
8217.00†	89.884	359.335	7458.69	862.76	852.13	-920.28	40°04'25.544"N	104°54'47.622"W	0.00	
8317.00†	89.884	359.335	7458.90	962.76	952.13	-921.44	40°04'26.532"N	104°54'47.637"W	0.00	
8417.00†	89.884	359.335	7459.10	1062.76	1052.12	-922.60	40°04'27.520"N	104°54'47.652"W	0.00	
8517.00†	89.884	359.335	7459.30	1162.75	1152.11	-923.76	40°04'28.508"N	104°54'47.667"W	0.00	
8617.00†	89.884	359.335	7459.51	1262.75	1252.10	-924.92	40°04'29.496"N	104°54'47.682"W	0.00	
8717.00†	89.884	359.335	7459.71	1362.75	1352.10	-926.08	40°04'30.485"N	104°54'47.697"W	0.00	
8817.00†	89.884	359.335	7459.91	1462.75	1452.09	-927.24	40°04'31.473"N	104°54'47.712"W	0.00	
8917.00†	89.884	359.335	7460.11	1562.75	1552.08	-928.40	40°04'32.461"N	104°54'47.727"W	0.00	
9017.00†	89.884	359.335	7460.32	1662.75	1652.08	-929.56	40°04'33.449"N	104°54'47.742"W	0.00	
9117.00†	89.884	359.335	7460.52	1762.75	1752.07	-930.72	40°04'34.437"N	104°54'47.757"W	0.00	
9217.00†	89.884	359.335	7460.72	1862.75	1852.06	-931.88	40°04'35.425"N	104°54'47.772"W	0.00	
9317.00†	89.884	359.335	7460.93	1962.75	1952.06	-933.04	40°04'36.413"N	104°54'47.787"W	0.00	
9417.00†	89.884	359.335	7461.13	2062.75	2052.05	-934.20	40°04'37.402"N	104°54'47.802"W	0.00	
9517.00†	89.884	359.335	7461.33	2162.75	2152.04	-935.36	40°04'38.390"N	104°54'47.817"W	0.00	
9617.00†	89.884	359.335	7461.54	2262.75	2252.03	-936.52	40°04'39.378"N	104°54'47.832"W	0.00	
9717.00†	89.884	359.335	7461.74	2362.75	2352.03	-937.68	40°04'40.366"N	104°54'47.847"W	0.00	
9817.00†	89.884	359.335	7461.94	2462.75	2452.02	-938.84	40°04'41.354"N	104°54'47.862"W	0.00	
9917.00†	89.884	359.335	7462.15	2562.75	2552.01	-940.00	40°04'42.342"N	104°54'47.877"W	0.00	
10017.00†	89.884	359.335	7462.35	2662.75	2652.01	-941.16	40°04'43.330"N	104°54'47.892"W	0.00	
10117.00†	89.884	359.335	7462.55	2762.75	2752.00	-942.33	40°04'44.319"N	104°54'47.907"W	0.00	
10217.00†	89.884	359.335	7462.75	2862.75	2851.99	-943.49	40°04'45.307"N	104°54'47.921"W	0.00	
10317.00†	89.884	359.335	7462.96	2962.75	2951.99	-944.65	40°04'46.295"N	104°54'47.936"W	0.00	
10417.00†	89.884	359.335	7463.16	3062.75	3051.98	-945.81	40°04'47.283"N	104°54'47.951"W	0.00	
10517.00†	89.884	359.335	7463.36	3162.75	3151.97	-946.97	40°04'48.271"N	104°54'47.966"W	0.00	
10617.00†	89.884	359.335	7463.57	3262.75	3251.97	-948.13	40°04'49.259"N	104°54'47.981"W	0.00	
10717.00†	89.884	359.335	7463.77	3362.75	3351.96	-949.29	40°04'50.248"N	104°54'47.996"W	0.00	
10817.00†	89.884	359.335	7463.97	3462.75	3451.95	-950.45	40°04'51.236"N	104°54'48.011"W	0.00	
10917.00†	89.884	359.335	7464.18	3562.75	3551.94	-951.61	40°04'52.224"N	104°54'48.026"W	0.00	
11017.00†	89.884	359.335	7464.38	3662.75	3651.94	-952.77	40°04'53.212"N	104°54'48.041"W	0.00	
11117.00†	89.884	359.335	7464.58	3762.75	3751.93	-953.93	40°04'54.200"N	104°54'48.056"W	0.00	
11217.00†	89.884	359.335	7464.78	3862.75	3851.92	-955.09	40°04'55.188"N	104°54'48.071"W	0.00	
11317.00†	89.884	359.335	7464.99	3962.75	3951.92	-956.25	40°04'56.176"N	104°54'48.086"W	0.00	
11417.00†	89.884	359.335	7465.19	4062.75	4051.91	-957.41	40°04'57.165"N	104°54'48.101"W	0.00	
11517.00†	89.884	359.335	7465.39	4162.75	4151.90	-958.57	40°04'58.153"N	104°54'48.116"W	0.00	
11617.00†	89.884	359.335	7465.60	4262.75	4251.90	-959.73	40°04'59.141"N	104°54'48.131"W	0.00	
11717.00†	89.884	359.335	7465.80	4362.75	4351.89	-960.89	40°05'00.129"N	104°54'48.146"W	0.00	
11817.00†	89.884	359.335	7466.00	4462.75	4451.88	-962.05	40°05'01.117"N	104°54'48.161"W	0.00	
11917.00†	89.884	359.335	7466.21	4562.75	4551.88	-963.21	40°05'02.105"N	104°54'48.176"W	0.00	
12017.00†	89.884	359.335	7466.41	4662.75	4651.87	-964.37	40°05'03.093"N	104°54'48.191"W	0.00	
12117.00†	89.884	359.335	7466.61	4762.75	4751.86	-965.53	40°05'04.082"N	104°54'48.206"W	0.00	
12217.00†	89.884	359.335	7466.82	4862.75	4851.85	-966.69	40°05'05.070"N	104°54'48.221"W	0.00	



Planned Wellpath Report

NRC 28N-5HZ (PERMIT REV-1) PWP

Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)
Area	COLORADO	Well	NRC 28N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 28N-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12317.00†	89.884	359.335	7467.02	4962.75	4951.85	-967.85	40°05'06.058"N	104°54'48.236"W	0.00	
12417.00†	89.884	359.335	7467.22	5062.75	5051.84	-969.01	40°05'07.046"N	104°54'48.251"W	0.00	
12517.00†	89.884	359.335	7467.42	5162.75	5151.83	-970.17	40°05'08.034"N	104°54'48.266"W	0.00	
12617.00†	89.884	359.335	7467.63	5262.75	5251.83	-971.33	40°05'09.022"N	104°54'48.281"W	0.00	
12717.00†	89.884	359.335	7467.83	5362.75	5351.82	-972.49	40°05'10.011"N	104°54'48.296"W	0.00	
12800.42	89.884	359.335	7468.00 ¹	5446.16	5435.23	-973.46	40°05'10.835"N	104°54'48.308"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: NRC 28N-5HZ PWB Ref Wellpath: NRC 28N-5HZ (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	1280.00	1263.00	17.00	1280.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1280.00	1263.00	17.00	1280.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1280.00	7875.30	6595.30	1280.00	7458.00	0.00	0.00	510.46	-916.32
7in Casing Intermediate	17.00	7875.30	7858.30	17.00	7458.00	0.00	0.00	510.46	-916.32
6.125in Open Hole	7875.30	12800.42	4925.12	7458.00	7468.00	510.46	-916.32	5435.23	-973.46
4.5in Casing Production	17.00	12800.42	12783.42	17.00	7468.00	0.00	0.00	5435.23	-973.46

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) NRC 28N-5HZ BHL ON PLAT (460'FNL & 2265'FEL, SEC.05)	12800.42	7468.00	5435.23	-973.46	3164123.52	1274842.31	40°05'10.835"N	104°54'48.308"W	point
NRC 28N-5HZ LAND BOX		7500.00	0.00	0.00	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W	polygon
NRC SECTION 5 LINES		7500.00	0.00	0.00	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W	polygon
NRC SECTION 8 LINES		7500.00	0.00	0.00	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W	polygon

SURVEY PROGRAM - Ref Wellbore: NRC 28N-5HZ PWB Ref Wellpath: NRC 28N-5HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7875.30	NaviTrak (Standard)		NRC 28N-5HZ PWB
7875.30	12800.42	NaviTrak (Standard)		NRC 28N-5HZ PWB



Planned Wellpath Report

NRC 28N-5HZ (PERMIT REV-1) PWP

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#25 NRC 28N-5HZ (500'FNL & 1350'FEL, SEC.08)
Area	COLORADO	Well	NRC 28N-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 28N-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
4263.85	12.000	266.145	4210.00	PARKMAN
4606.33	12.000	266.145	4545.00	SUSSEX
7461.22	48.475	359.335	7314.00	SHARON SPRINGS
7556.58	58.012	359.335	7371.00	NIOBRARA A
7758.99	78.253	359.335	7446.00	NIOBRARA B