

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Field: WELD COUNTY (KERR MCGEE) Well: NRC 1C-5HZ
Facility: SEC.08-T1N-R67W Wellbore: NRC 1C-5HZ PWB

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

True vertical depths are referenced to Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB)	North Reference: True north
Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB) to Mean Sea Level: 5026 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wjgjd02 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#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)	3736.61	148.02	3165223.184	1269413.787
Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB) to Mud line (At Slot: SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08))				5026ft
Mean Sea Level to Mud line (At Slot: SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08))				0ft
Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB) to Mean Sea Level				5026ft

Survey Program

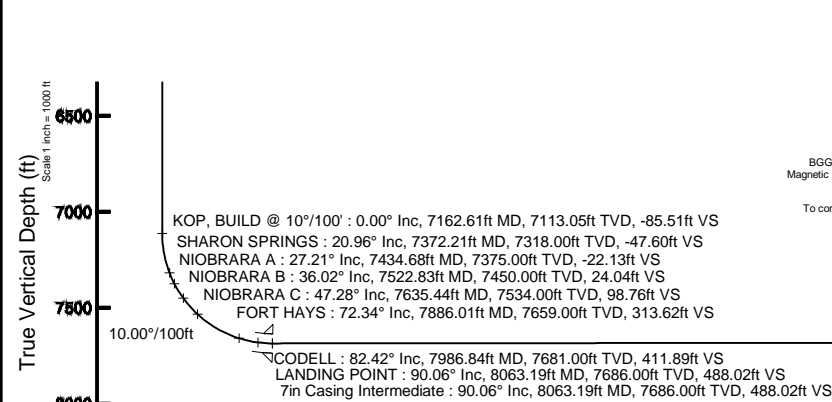
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	8063.19	NaviTrak	NaviTrak (Standard)		NRC 1C-5HZ PWB
8063.19	12998.44	NaviTrak	NaviTrak (Standard)		NRC 1C-5HZ PWB

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	97.590	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1400.00	0.000	97.590	1400.00	0.00	0.00	0.00	0.00
END NUDGE	1900.00	10.000	97.590	1897.47	-5.75	43.14	2.00	-6.25
BEGIN DROP	4829.03	10.000	97.590	4782.00	-72.93	547.31	0.00	-79.27
END DROP	5329.03	0.000	359.336	5279.47	-78.68	590.45	2.00	-85.51
KOP, BUILD @ 10°/100'	7162.61	0.000	359.336	7113.05	-78.68	590.45	0.00	-85.51
LANDING POINT	8063.19	90.058	359.336	7686.00	494.82	583.80	10.00	488.02
TOTAL DEPTH	12998.44	90.058	359.336	7681.00	5429.73	526.62	0.00	5423.27

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
NRC SECTION 5 LINES		7500.00	0.71	-90.10	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W
NRC SECTION 8 LINES		7500.00	0.71	-90.10	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W
NRC 1C-5HZ BHL ON PLAT (460'FNL & 675'FEL, SEC.05)	12998.44	7681.00	5429.73	526.62	3165113.62	1274846.89	40°05'10.774"N	104°54'27.850"W
NRC 1C-5HZ LAND BOX		7700.00	0.00	0.00	3165223.18	1269413.79	40°04'17.116"N	104°54'34.625"W

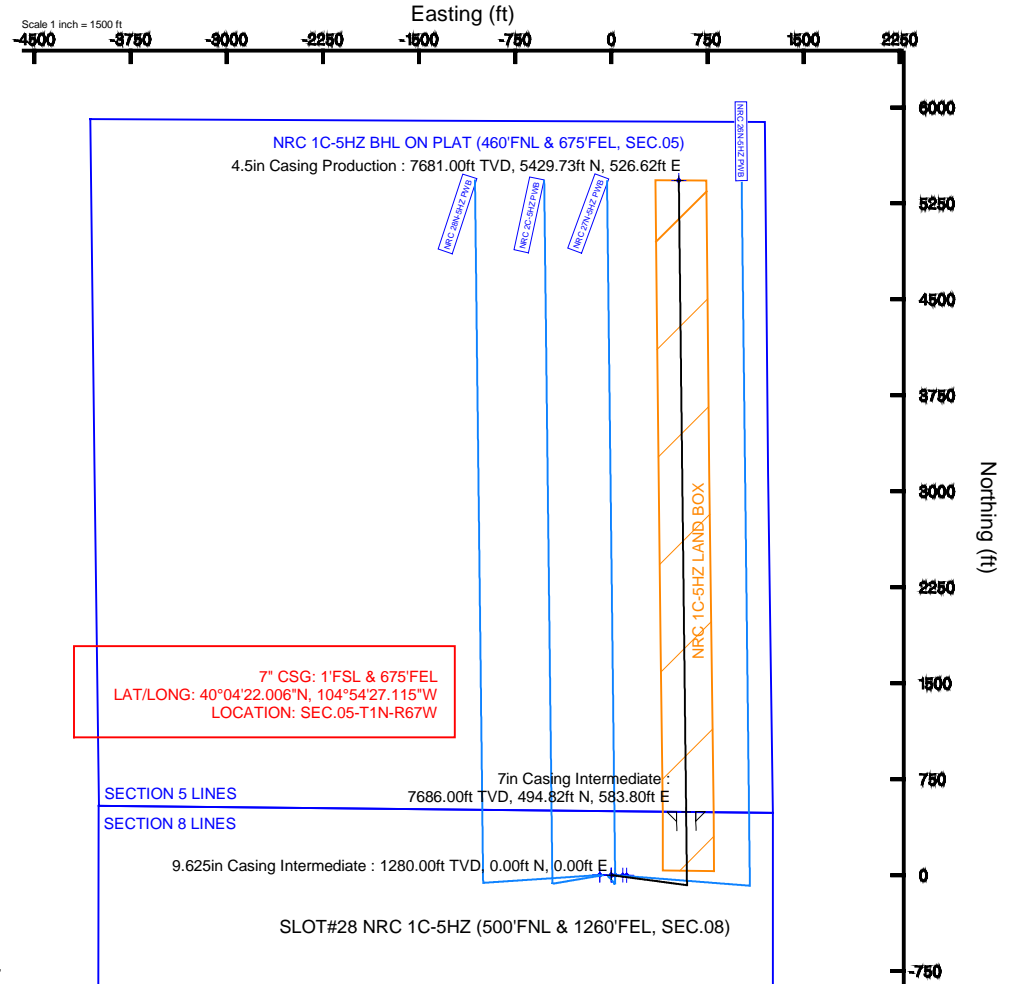


BGGM (1945.0 to 2015.0) Dip: 66.66° Field: 52600.4 nT
Magnetic North is 8.61 degrees East of True North (at 12/19/2013)

To correct azimuth from Magnetic to True add 8.61 degrees

Vertical Section (ft)

Azimuth 359.34° with reference 0.00 N, 0.00 E



SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)

4.5in Casing Production : 90.06° Inc, 12998.44ft MD, 7681.00ft TVD, 5423.27ft VS

TOTAL DEPTH : 90.06° Inc, 12998.44ft MD, 7681.00ft TVD, 5423.27ft VS

NRC 1C-5HZ BHL ON PLAT (460'FNL & 675'FEL, SEC.05)

Scale 1 inch = 1000 ft



Planned Wellpath Report

NRC 1C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Area	COLORADO	Well	NRC 1C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 1C-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 09:57:31
Convergence at slot	n/a	Database/Source file	WellArchitectDB/NRC_1C-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	3736.61	148.02	3165223.18	1269413.79	40°04'17.116"N	104°54'34.625"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#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB) to Facility Vertical Datum	5026.00ft
Horizontal Reference Pt	Slot	Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB) to Mean Sea Level	5026.00ft
Vertical Reference Pt	Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB)	Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB) to Mud Line at Slot (SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08))	5026.00ft
MD Reference Pt	Rig on SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.34°



Planned Wellpath Report

NRC 1C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Area	COLORADO	Well	NRC 1C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 1C-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (146 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	97.590	0.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
17.00	0.000	97.590	17.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	TIE-ON
117.00†	0.000	97.590	117.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
217.00†	0.000	97.590	217.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
317.00†	0.000	97.590	317.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
417.00†	0.000	97.590	417.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
517.00†	0.000	97.590	517.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
617.00†	0.000	97.590	617.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
717.00†	0.000	97.590	717.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
817.00†	0.000	97.590	817.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
917.00†	0.000	97.590	917.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
1017.00†	0.000	97.590	1017.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
1117.00†	0.000	97.590	1117.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
1217.00†	0.000	97.590	1217.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
1317.00†	0.000	97.590	1317.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	
1400.00	0.000	97.590	1400.00	0.00	0.00	0.00	40°04'17.116"N	104°54'34.625"W	0.00	BEGIN NUDGE
1417.00†	0.340	97.590	1417.00	-0.01	-0.01	0.05	40°04'17.116"N	104°54'34.624"W	2.00	
1517.00†	2.340	97.590	1516.97	-0.34	-0.32	2.37	40°04'17.113"N	104°54'34.595"W	2.00	
1617.00†	4.340	97.590	1616.79	-1.18	-1.09	8.14	40°04'17.105"N	104°54'34.520"W	2.00	
1717.00†	6.340	97.590	1716.35	-2.52	-2.31	17.37	40°04'17.093"N	104°54'34.402"W	2.00	
1817.00†	8.340	97.590	1815.53	-4.35	-4.00	30.03	40°04'17.076"N	104°54'34.239"W	2.00	
1900.00	10.000	97.590	1897.47	-6.25	-5.75	43.14	40°04'17.059"N	104°54'34.070"W	2.00	END NUDGE
1917.00†	10.000	97.590	1914.21	-6.67	-6.14	46.07	40°04'17.055"N	104°54'34.032"W	0.00	
2017.00†	10.000	97.590	2012.69	-9.16	-8.43	63.28	40°04'17.033"N	104°54'33.811"W	0.00	
2117.00†	10.000	97.590	2111.17	-11.66	-10.73	80.49	40°04'17.010"N	104°54'33.590"W	0.00	
2217.00†	10.000	97.590	2209.65	-14.15	-13.02	97.71	40°04'16.987"N	104°54'33.368"W	0.00	
2317.00†	10.000	97.590	2308.13	-16.64	-15.31	114.92	40°04'16.965"N	104°54'33.147"W	0.00	
2417.00†	10.000	97.590	2406.61	-19.14	-17.61	132.13	40°04'16.942"N	104°54'32.925"W	0.00	
2517.00†	10.000	97.590	2505.09	-21.63	-19.90	149.34	40°04'16.919"N	104°54'32.704"W	0.00	
2617.00†	10.000	97.590	2603.57	-24.12	-22.19	166.56	40°04'16.897"N	104°54'32.483"W	0.00	
2717.00†	10.000	97.590	2702.05	-26.62	-24.49	183.77	40°04'16.874"N	104°54'32.261"W	0.00	
2817.00†	10.000	97.590	2800.53	-29.11	-26.78	200.98	40°04'16.851"N	104°54'32.040"W	0.00	
2917.00†	10.000	97.590	2899.01	-31.60	-29.07	218.19	40°04'16.829"N	104°54'31.818"W	0.00	
3017.00†	10.000	97.590	2997.50	-34.09	-31.37	235.41	40°04'16.806"N	104°54'31.597"W	0.00	
3117.00†	10.000	97.590	3095.98	-36.59	-33.66	252.62	40°04'16.783"N	104°54'31.376"W	0.00	
3217.00†	10.000	97.590	3194.46	-39.08	-35.96	269.83	40°04'16.761"N	104°54'31.154"W	0.00	
3317.00†	10.000	97.590	3292.94	-41.57	-38.25	287.04	40°04'16.738"N	104°54'30.933"W	0.00	
3417.00†	10.000	97.590	3391.42	-44.07	-40.54	304.26	40°04'16.715"N	104°54'30.711"W	0.00	
3517.00†	10.000	97.590	3489.90	-46.56	-42.84	321.47	40°04'16.693"N	104°54'30.490"W	0.00	
3617.00†	10.000	97.590	3588.38	-49.05	-45.13	338.68	40°04'16.670"N	104°54'30.269"W	0.00	
3717.00†	10.000	97.590	3686.86	-51.54	-47.42	355.90	40°04'16.647"N	104°54'30.047"W	0.00	
3817.00†	10.000	97.590	3785.34	-54.04	-49.72	373.11	40°04'16.625"N	104°54'29.826"W	0.00	
3917.00†	10.000	97.590	3883.82	-56.53	-52.01	390.32	40°04'16.602"N	104°54'29.604"W	0.00	
4017.00†	10.000	97.590	3982.30	-59.02	-54.30	407.53	40°04'16.579"N	104°54'29.383"W	0.00	
4117.00†	10.000	97.590	4080.78	-61.52	-56.60	424.75	40°04'16.557"N	104°54'29.161"W	0.00	



Planned Wellpath Report

NRC 1C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Area	COLORADO	Well	NRC 1C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 1C-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	10.000	97.590	4179.26	-64.01	-58.89	441.96	40°04'16.534"N	104°54'28.940"W	0.00	
4252.27†	10.000	97.590	4214.00	-64.89	-59.70	448.03	40°04'16.526"N	104°54'28.862"W	0.00	PARKMAN
4317.00†	10.000	97.590	4277.75	-66.50	-61.19	459.17	40°04'16.511"N	104°54'28.719"W	0.00	
4417.00†	10.000	97.590	4376.23	-69.00	-63.48	476.38	40°04'16.489"N	104°54'28.497"W	0.00	
4517.00†	10.000	97.590	4474.71	-71.49	-65.77	493.60	40°04'16.466"N	104°54'28.276"W	0.00	
4592.44†	10.000	97.590	4549.00	-73.37	-67.50	506.58	40°04'16.449"N	104°54'28.109"W	0.00	SUSSEX
4617.00†	10.000	97.590	4573.19	-73.98	-68.07	510.81	40°04'16.443"N	104°54'28.054"W	0.00	
4717.00†	10.000	97.590	4671.67	-76.47	-70.36	528.02	40°04'16.421"N	104°54'27.833"W	0.00	
4817.00†	10.000	97.590	4770.15	-78.97	-72.65	545.24	40°04'16.398"N	104°54'27.612"W	0.00	
4829.03	10.000	97.590	4782.00	-79.27	-72.93	547.31	40°04'16.395"N	104°54'27.585"W	0.00	BEGIN DROP
4917.00†	8.241	97.590	4868.85	-81.27	-74.77	561.13	40°04'16.377"N	104°54'27.407"W	2.00	
5017.00†	6.241	97.590	4968.05	-83.08	-76.44	573.62	40°04'16.361"N	104°54'27.247"W	2.00	
5117.00†	4.241	97.590	5067.63	-84.39	-77.64	582.67	40°04'16.349"N	104°54'27.130"W	2.00	
5217.00†	2.241	97.590	5167.46	-85.20	-78.39	588.28	40°04'16.341"N	104°54'27.058"W	2.00	
5317.00†	0.241	97.590	5267.43	-85.51	-78.67	590.42	40°04'16.338"N	104°54'27.030"W	2.00	
5329.03	0.000	359.336	5279.47	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	2.00	END DROP
5417.00†	0.000	359.336	5367.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
5517.00†	0.000	359.336	5467.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
5617.00†	0.000	359.336	5567.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
5717.00†	0.000	359.336	5667.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
5817.00†	0.000	359.336	5767.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
5917.00†	0.000	359.336	5867.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6017.00†	0.000	359.336	5967.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6117.00†	0.000	359.336	6067.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6217.00†	0.000	359.336	6167.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6317.00†	0.000	359.336	6267.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6417.00†	0.000	359.336	6367.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6517.00†	0.000	359.336	6467.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6617.00†	0.000	359.336	6567.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6717.00†	0.000	359.336	6667.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6817.00†	0.000	359.336	6767.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
6917.00†	0.000	359.336	6867.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
7017.00†	0.000	359.336	6967.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
7117.00†	0.000	359.336	7067.43	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	
7162.61	0.000	359.336	7113.05	-85.51	-78.68	590.45	40°04'16.338"N	104°54'27.030"W	0.00	KOP, BUILD @ 10°/100'
7217.00†	5.439	359.336	7167.35	-82.94	-76.10	590.42	40°04'16.364"N	104°54'27.030"W	10.00	
7317.00†	15.439	359.336	7265.57	-64.84	-58.00	590.21	40°04'16.543"N	104°54'27.033"W	10.00	
7372.21†	20.960	359.336	7318.00	-47.60	-40.77	590.01	40°04'16.713"N	104°54'27.036"W	10.00	SHARON SPRINGS
7417.00†	25.439	359.336	7359.16	-29.96	-23.13	589.80	40°04'16.887"N	104°54'27.038"W	10.00	
7434.68†	27.206	359.336	7375.00	-22.13	-15.29	589.71	40°04'16.965"N	104°54'27.039"W	10.00	NIOBRARA A
7517.00†	35.439	359.336	7445.26	20.63	27.46	589.22	40°04'17.387"N	104°54'27.046"W	10.00	
7522.83†	36.022	359.336	7450.00	24.04	30.87	589.18	40°04'17.421"N	104°54'27.046"W	10.00	NIOBRARA B
7617.00†	45.439	359.336	7521.28	85.41	92.24	588.47	40°04'18.027"N	104°54'27.055"W	10.00	
7635.44†	47.282	359.336	7534.00	98.76	105.58	588.31	40°04'18.159"N	104°54'27.057"W	10.00	NIOBRARA C
7717.00†	55.439	359.336	7584.89	162.41	169.23	587.57	40°04'18.788"N	104°54'27.067"W	10.00	



Planned Wellpath Report

NRC 1C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Area	COLORADO	Well	NRC 1C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 1C-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7817.00†	65.439	359.336	7634.16	249.28	256.10	586.57	40°04'19.647"N	104°54'27.080"W	10.00	
7886.01†	72.339	359.336	7659.00	313.62	320.43	585.82	40°04'20.282"N	104°54'27.089"W	10.00	FORT HAYS
7917.00†	75.439	359.336	7667.60	343.39	350.20	585.48	40°04'20.577"N	104°54'27.094"W	10.00	
7986.84†	82.423	359.336	7681.00	411.89	418.69	584.68	40°04'21.254"N	104°54'27.104"W	10.00	CODELL
8017.00†	85.439	359.336	7684.19	441.88	448.68	584.34	40°04'21.550"N	104°54'27.109"W	10.00	
8063.19	90.058	359.336	7686.00	488.02	494.82	583.80	40°04'22.006"N	104°54'27.115"W	10.00	LANDING POINT
8117.00†	90.058	359.336	7685.95	541.83	548.62	583.18	40°04'22.538"N	104°54'27.123"W	0.00	
8217.00†	90.058	359.336	7685.85	641.83	648.62	582.02	40°04'23.526"N	104°54'27.138"W	0.00	
8317.00†	90.058	359.336	7685.75	741.83	748.61	580.86	40°04'24.514"N	104°54'27.153"W	0.00	
8417.00†	90.058	359.336	7685.64	841.83	848.60	579.70	40°04'25.502"N	104°54'27.168"W	0.00	
8517.00†	90.058	359.336	7685.54	941.83	948.60	578.54	40°04'26.490"N	104°54'27.183"W	0.00	
8617.00†	90.058	359.336	7685.44	1041.83	1048.59	577.39	40°04'27.478"N	104°54'27.198"W	0.00	
8717.00†	90.058	359.336	7685.34	1141.83	1148.58	576.23	40°04'28.466"N	104°54'27.213"W	0.00	
8817.00†	90.058	359.336	7685.24	1241.83	1248.58	575.07	40°04'29.455"N	104°54'27.228"W	0.00	
8917.00†	90.058	359.336	7685.14	1341.83	1348.57	573.91	40°04'30.443"N	104°54'27.242"W	0.00	
9017.00†	90.058	359.336	7685.04	1441.83	1448.56	572.75	40°04'31.431"N	104°54'27.257"W	0.00	
9117.00†	90.058	359.336	7684.93	1541.83	1548.56	571.59	40°04'32.419"N	104°54'27.272"W	0.00	
9217.00†	90.058	359.336	7684.83	1641.83	1648.55	570.43	40°04'33.407"N	104°54'27.287"W	0.00	
9317.00†	90.058	359.336	7684.73	1741.83	1748.54	569.27	40°04'34.395"N	104°54'27.302"W	0.00	
9417.00†	90.058	359.336	7684.63	1841.83	1848.54	568.12	40°04'35.384"N	104°54'27.317"W	0.00	
9517.00†	90.058	359.336	7684.53	1941.83	1948.53	566.96	40°04'36.372"N	104°54'27.332"W	0.00	
9617.00†	90.058	359.336	7684.43	2041.83	2048.52	565.80	40°04'37.360"N	104°54'27.347"W	0.00	
9717.00†	90.058	359.336	7684.33	2141.83	2148.52	564.64	40°04'38.348"N	104°54'27.361"W	0.00	
9817.00†	90.058	359.336	7684.23	2241.83	2248.51	563.48	40°04'39.336"N	104°54'27.376"W	0.00	
9917.00†	90.058	359.336	7684.12	2341.83	2348.50	562.32	40°04'40.324"N	104°54'27.391"W	0.00	
10017.00†	90.058	359.336	7684.02	2441.83	2448.50	561.16	40°04'41.312"N	104°54'27.406"W	0.00	
10117.00†	90.058	359.336	7683.92	2541.83	2548.49	560.01	40°04'42.301"N	104°54'27.421"W	0.00	
10217.00†	90.058	359.336	7683.82	2641.83	2648.48	558.85	40°04'43.289"N	104°54'27.436"W	0.00	
10317.00†	90.058	359.336	7683.72	2741.83	2748.48	557.69	40°04'44.277"N	104°54'27.451"W	0.00	
10417.00†	90.058	359.336	7683.62	2841.83	2848.47	556.53	40°04'45.265"N	104°54'27.466"W	0.00	
10517.00†	90.058	359.336	7683.52	2941.83	2948.46	555.37	40°04'46.253"N	104°54'27.480"W	0.00	
10617.00†	90.058	359.336	7683.41	3041.83	3048.46	554.21	40°04'47.241"N	104°54'27.495"W	0.00	
10717.00†	90.058	359.336	7683.31	3141.83	3148.45	553.05	40°04'48.230"N	104°54'27.510"W	0.00	
10817.00†	90.058	359.336	7683.21	3241.83	3248.44	551.89	40°04'49.218"N	104°54'27.525"W	0.00	
10917.00†	90.058	359.336	7683.11	3341.83	3348.44	550.74	40°04'50.206"N	104°54'27.540"W	0.00	
11017.00†	90.058	359.336	7683.01	3441.83	3448.43	549.58	40°04'51.194"N	104°54'27.555"W	0.00	
11117.00†	90.058	359.336	7682.91	3541.83	3548.42	548.42	40°04'52.182"N	104°54'27.570"W	0.00	
11217.00†	90.058	359.336	7682.81	3641.83	3648.42	547.26	40°04'53.170"N	104°54'27.585"W	0.00	
11317.00†	90.058	359.336	7682.70	3741.83	3748.41	546.10	40°04'54.158"N	104°54'27.599"W	0.00	
11417.00†	90.058	359.336	7682.60	3841.83	3848.40	544.94	40°04'55.147"N	104°54'27.614"W	0.00	
11517.00†	90.058	359.336	7682.50	3941.83	3948.39	543.78	40°04'56.135"N	104°54'27.629"W	0.00	
11617.00†	90.058	359.336	7682.40	4041.83	4048.39	542.62	40°04'57.123"N	104°54'27.644"W	0.00	
11717.00†	90.058	359.336	7682.30	4141.83	4148.38	541.47	40°04'58.111"N	104°54'27.659"W	0.00	
11817.00†	90.058	359.336	7682.20	4241.83	4248.37	540.31	40°04'59.099"N	104°54'27.674"W	0.00	
11917.00†	90.058	359.336	7682.10	4341.83	4348.37	539.15	40°05'00.087"N	104°54'27.689"W	0.00	



Planned Wellpath Report

NRC 1C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Area	COLORADO	Well	NRC 1C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 1C-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH DATA (146 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12017.00†	90.058	359.336	7681.99	4441.83	4448.36	537.99	40°05'01.076"N	104°54'27.704"W	0.00	
12117.00†	90.058	359.336	7681.89	4541.83	4548.35	536.83	40°05'02.064"N	104°54'27.718"W	0.00	
12217.00†	90.058	359.336	7681.79	4641.83	4648.35	535.67	40°05'03.052"N	104°54'27.733"W	0.00	
12317.00†	90.058	359.336	7681.69	4741.83	4748.34	534.51	40°05'04.040"N	104°54'27.748"W	0.00	
12417.00†	90.058	359.336	7681.59	4841.83	4848.33	533.36	40°05'05.028"N	104°54'27.763"W	0.00	
12517.00†	90.058	359.336	7681.49	4941.83	4948.33	532.20	40°05'06.016"N	104°54'27.778"W	0.00	
12617.00†	90.058	359.336	7681.39	5041.83	5048.32	531.04	40°05'07.004"N	104°54'27.793"W	0.00	
12717.00†	90.058	359.336	7681.29	5141.83	5148.31	529.88	40°05'07.993"N	104°54'27.808"W	0.00	
12817.00†	90.058	359.336	7681.18	5241.83	5248.31	528.72	40°05'08.981"N	104°54'27.823"W	0.00	
12917.00†	90.058	359.336	7681.08	5341.83	5348.30	527.56	40°05'09.969"N	104°54'27.837"W	0.00	
12998.44	90.058	359.336	7681.00 ¹	5423.27	5429.73	526.62	40°05'10.774"N	104°54'27.850"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: NRC 1C-5HZ PWB Ref Wellpath: NRC 1C-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 Intermediate	17.00	1280.00	1263.00	17.00	1280.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1280.00	8063.19	6783.19	1280.00	7686.00	0.00	0.00	494.82	583.80
7in Casing Intermediate	17.00	8063.19	8046.19	17.00	7686.00	0.00	0.00	494.82	583.80
6.125in Open Hole	8063.19	12998.44	4935.25	7686.00	7681.00	494.82	583.80	5429.73	526.62
4.5in Casing Production	17.00	12998.44	12981.44	17.00	7681.00	0.00	0.00	5429.73	526.62



Planned Wellpath Report

NRC 1C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Area	COLORADO	Well	NRC 1C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 1C-5HZ 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
NRC SECTION 5 LINES		7500.00	0.71	-90.10	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W	polygon
NRC SECTION 8 LINES		7500.00	0.71	-90.10	3165133.08	1269413.90	40°04'17.123"N	104°54'35.784"W	polygon
1) NRC 1C-5HZ BHL ON PLAT (460'FNL & 675'FEL, SEC.05)	12998.44	7681.00	5429.73	526.62	3165713.62	1274846.69	40°05'10.774"N	104°54'27.850"W	point
NRC 1C-5HZ LAND BOX		7700.00	0.00	0.00	3165223.18	1269413.79	40°04'17.116"N	104°54'34.625"W	polygon

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

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	8063.19	NaviTrak (Standard)		NRC 1C-5HZ PWB
8063.19	12998.44	NaviTrak (Standard)		NRC 1C-5HZ PWB



Planned Wellpath Report

NRC 1C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#28 NRC 1C-5HZ (500'FNL & 1260'FEL, SEC.08)
Area	COLORADO	Well	NRC 1C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NRC 1C-5HZ PWB
Facility	SEC.08-T1N-R67W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
4252.27	10.000	97.590	4214.00	PARKMAN
4592.44	10.000	97.590	4549.00	SUSSEX
7372.21	20.960	359.336	7318.00	SHARON SPRINGS
7434.68	27.206	359.336	7375.00	NIOBRARA A
7522.83	36.022	359.336	7450.00	NIOBRARA B
7635.44	47.282	359.336	7534.00	NIOBRARA C
7886.01	72.339	359.336	7659.00	FORT HAYS
7986.84	82.423	359.336	7681.00	CODELL