

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)
 Field: WELD COUNTY (KERR MCGEE) Well: ZIEMER 13C-5HZ
 Facility: SEC.05-T1N-R65W Wellbore: ZIEMER 13C-5HZ PWB

Plot reference wellpath is ZIEMER 13C-5HZ (PERMIT REV-1) PWB

True vertical depths are referenced to Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB)	North Reference: True north
Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) to Mean Sea Level: 4974 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wjajef02 on 6/19/2013

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
SEC.05-T1N-R65W	3227276.210	1273237.510	40°04'50.053"N	104°41'15.984"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)	2292.49	-2301.35	3224954.055	1275508.737	40°05'12.707"N	104°41'45.593"W
Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB) to Mud line (At Slot: SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05))					4974ft	
Mean Sea Level to Mud line (At Slot: SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05))					0ft	
Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB) to Mean Sea Level					4974ft	

Survey Program

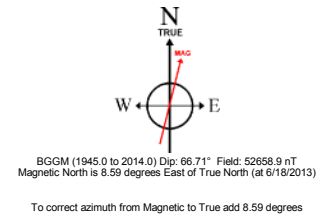
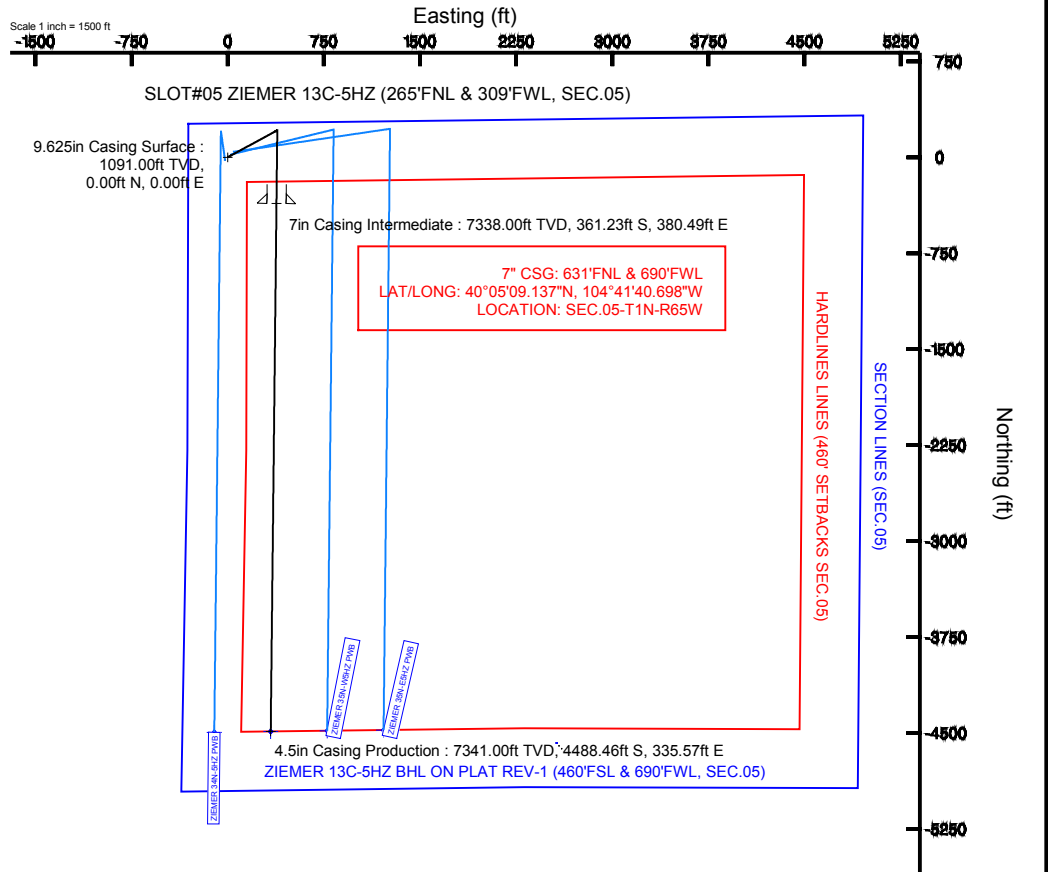
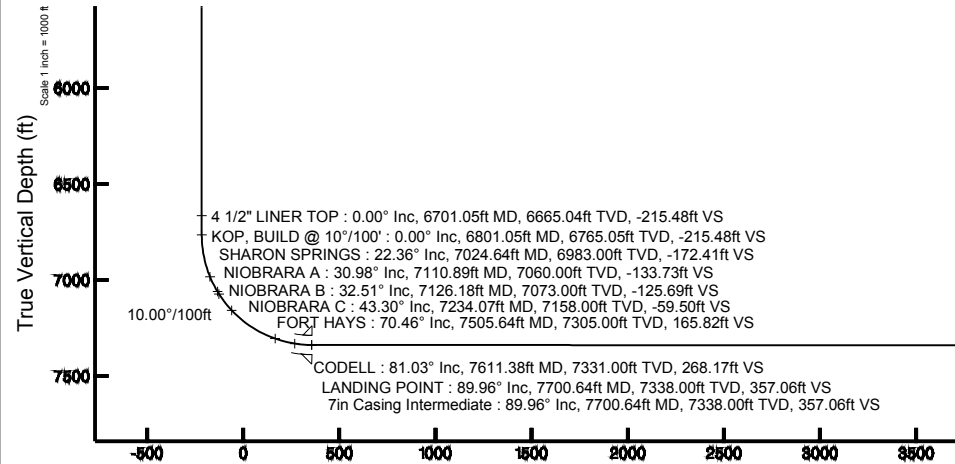
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	7700.64	NaviTrak	NaviTrak (Standard)		ZIEMER 13C-5HZ PWB
7700.64	11828.12	OnTrak	OnTrak (Standard)		ZIEMER 13C-5HZ PWB

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	61.350	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1600.00	0.000	61.350	1600.00	0.00	0.00	0.00	0.00
END NUDGE	2100.00	10.000	61.350	2097.47	20.87	38.19	2.00	-21.28
BEGIN DROP	4136.47	10.000	61.350	4103.00	190.42	348.53	0.00	-194.20
END DROP	4636.47	0.000	180.624	4600.47	211.29	386.72	2.00	-215.48
KOP, BUILD @ 10°/100'	6801.05	0.000	180.624	6765.05	211.29	386.72	0.00	-215.48
LANDING POINT	7700.64	89.958	180.624	7338.00	-361.22	380.49	10.00	357.06
TOTAL DEPTH	11828.12	89.958	180.624	7341.00	-4488.46	335.57	0.00	4484.54

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
BOYD PAD HARDLINES LINES (460' SETBACKS SEC.05)		4974.00	-4577.60	2563.83	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W
BOYD PAD SECTION LINES (SEC.05)		4974.00	-4577.60	2563.83	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W
ZIEMER 13C-5HZ BHL ON PLAT REV-1 (460'FSL & 690'FWL, SEC.05)	11828.12	7341.00	-4488.46	335.57	3225330.29	1271023.69	40°04'28.351"N	104°41'41.276"W



4.5in Casing Production : 89.96° Inc, 11828.12ft MD, 7341.00ft TVD, 4484.54ft VS
 TOTAL DEPTH : 89.96° Inc, 11828.12ft MD, 7341.00ft TVD, 4484.54ft VS
 ZIEMER 13C-5HZ BHL ON PLAT REV-1 (460'FSL & 690'FWL, SEC.05)



Planned Wellpath Report

ZIEMER 13C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)
Area	COLORADO	Well	ZIEMER 13C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ZIEMER 13C-5HZ PWB
Facility	SEC.05-T1N-R65W		

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	0.999961	Report Generated	6/19/2013 at 08:50:07
Convergence at slot	n/a	Database/Source file	WellArchitectDB/ZIEMER_13C-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	2292.49	-2301.35	3224954.06	1275508.74	40°05'12.707"N	104°41'45.593"W
Facility Reference Pt			3227276.21	1273237.51	40°04'50.053"N	104°41'15.984"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#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB) to Facility Vertical Datum	4974.00ft
Horizontal Reference Pt	Slot	Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB) to Mean Sea Level	4974.00ft
Vertical Reference Pt	Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB)	Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB) to Mud Line at Slot (SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05))	4974.00ft
MD Reference Pt	Rig on SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.62°



Planned Wellpath Report

ZIEMER 13C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)
Area	COLORADO	Well	ZIEMER 13C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ZIEMER 13C-5HZ PWB
Facility	SEC.05-T1N-R65W		

WELLPATH DATA (137 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	61.350	0.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
17.00	0.000	61.350	17.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	TIE-ON
117.00†	0.000	61.350	117.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
217.00†	0.000	61.350	217.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
317.00†	0.000	61.350	317.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
417.00†	0.000	61.350	417.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
517.00†	0.000	61.350	517.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
617.00†	0.000	61.350	617.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
717.00†	0.000	61.350	717.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
817.00†	0.000	61.350	817.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
917.00†	0.000	61.350	917.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
1017.00†	0.000	61.350	1017.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
1041.00†	0.000	61.350	1041.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	FOX HILLS BASE
1117.00†	0.000	61.350	1117.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
1217.00†	0.000	61.350	1217.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
1317.00†	0.000	61.350	1317.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
1417.00†	0.000	61.350	1417.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
1517.00†	0.000	61.350	1517.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	
1600.00	0.000	61.350	1600.00	0.00	0.00	0.00	40°05'12.707"N	104°41'45.593"W	0.00	BEGIN NUDGE
1617.00†	0.340	61.350	1617.00	-0.02	0.02	0.04	40°05'12.707"N	104°41'45.592"W	2.00	
1717.00†	2.340	61.350	1716.97	-1.17	1.15	2.10	40°05'12.718"N	104°41'45.566"W	2.00	
1817.00†	4.340	61.350	1816.79	-4.02	3.94	7.21	40°05'12.746"N	104°41'45.500"W	2.00	
1917.00†	6.340	61.350	1916.35	-8.57	8.40	15.38	40°05'12.790"N	104°41'45.395"W	2.00	
2017.00†	8.340	61.350	2015.53	-14.81	14.53	26.59	40°05'12.851"N	104°41'45.251"W	2.00	
2100.00	10.000	61.350	2097.47	-21.28	20.87	38.19	40°05'12.913"N	104°41'45.102"W	2.00	END NUDGE
2117.00†	10.000	61.350	2114.21	-22.73	22.28	40.78	40°05'12.927"N	104°41'45.068"W	0.00	
2217.00†	10.000	61.350	2212.69	-31.22	30.61	56.02	40°05'13.009"N	104°41'44.872"W	0.00	
2317.00†	10.000	61.350	2311.17	-39.71	38.93	71.26	40°05'13.092"N	104°41'44.676"W	0.00	
2417.00†	10.000	61.350	2409.65	-48.20	47.26	86.50	40°05'13.174"N	104°41'44.480"W	0.00	
2517.00†	10.000	61.350	2508.13	-56.69	55.59	101.74	40°05'13.256"N	104°41'44.284"W	0.00	
2617.00†	10.000	61.350	2606.61	-65.18	63.91	116.98	40°05'13.339"N	104°41'44.088"W	0.00	
2717.00†	10.000	61.350	2705.09	-73.67	72.24	132.22	40°05'13.421"N	104°41'43.892"W	0.00	
2817.00†	10.000	61.350	2803.57	-82.16	80.56	147.46	40°05'13.503"N	104°41'43.696"W	0.00	
2917.00†	10.000	61.350	2902.05	-90.65	88.89	162.69	40°05'13.585"N	104°41'43.500"W	0.00	
3017.00†	10.000	61.350	3000.53	-99.15	97.21	177.93	40°05'13.668"N	104°41'43.304"W	0.00	
3117.00†	10.000	61.350	3099.01	-107.64	105.54	193.17	40°05'13.750"N	104°41'43.108"W	0.00	
3217.00†	10.000	61.350	3197.50	-116.13	113.87	208.41	40°05'13.832"N	104°41'42.912"W	0.00	
3317.00†	10.000	61.350	3295.98	-124.62	122.19	223.65	40°05'13.915"N	104°41'42.716"W	0.00	
3417.00†	10.000	61.350	3394.46	-133.11	130.52	238.89	40°05'13.997"N	104°41'42.519"W	0.00	
3517.00†	10.000	61.350	3492.94	-141.60	138.84	254.13	40°05'14.079"N	104°41'42.323"W	0.00	
3617.00†	10.000	61.350	3591.42	-150.09	147.17	269.37	40°05'14.161"N	104°41'42.127"W	0.00	
3717.00†	10.000	61.350	3689.90	-158.58	155.49	284.60	40°05'14.244"N	104°41'41.931"W	0.00	
3817.00†	10.000	61.350	3788.38	-167.08	163.82	299.84	40°05'14.326"N	104°41'41.735"W	0.00	
3917.00†	10.000	61.350	3886.86	-175.57	172.15	315.08	40°05'14.408"N	104°41'41.539"W	0.00	
3970.96†	10.000	61.350	3940.00	-180.15	176.64	323.30	40°05'14.453"N	104°41'41.433"W	0.00	PARKMAN



Planned Wellpath Report

ZIEMER 13C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)
Area	COLORADO	Well	ZIEMER 13C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ZIEMER 13C-5HZ PWB
Facility	SEC.05-T1N-R65W		

WELLPATH DATA (137 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4017.00†	10.000	61.350	3985.34	-184.06	180.47	330.32	40°05'14.490"N	104°41'41.343"W	0.00	
4117.00†	10.000	61.350	4083.82	-192.55	188.80	345.56	40°05'14.573"N	104°41'41.147"W	0.00	
4136.47	10.000	61.350	4103.00	-194.20	190.42	348.53	40°05'14.589"N	104°41'41.109"W	0.00	BEGIN DROP
4217.00†	8.389	61.350	4182.49	-200.49	196.59	359.82	40°05'14.650"N	104°41'40.964"W	2.00	
4317.00†	6.389	61.350	4281.65	-206.78	202.75	371.10	40°05'14.711"N	104°41'40.818"W	2.00	
4417.00†	4.389	61.350	4381.21	-211.38	207.26	379.35	40°05'14.755"N	104°41'40.712"W	2.00	
4504.96†	2.630	61.350	4469.00	-214.01	209.84	384.07	40°05'14.781"N	104°41'40.652"W	2.00	SUSSEX
4517.00†	2.389	61.350	4481.03	-214.27	210.09	384.54	40°05'14.783"N	104°41'40.646"W	2.00	
4617.00†	0.389	61.350	4580.99	-215.45	211.25	386.66	40°05'14.795"N	104°41'40.618"W	2.00	
4636.47	0.000	180.624	4600.47	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	2.00	END DROP
4717.00†	0.000	180.624	4680.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
4817.00†	0.000	180.624	4780.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
4917.00†	0.000	180.624	4880.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5017.00†	0.000	180.624	4980.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5117.00†	0.000	180.624	5080.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5217.00†	0.000	180.624	5180.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5317.00†	0.000	180.624	5280.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5417.00†	0.000	180.624	5380.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5517.00†	0.000	180.624	5480.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5617.00†	0.000	180.624	5580.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5717.00†	0.000	180.624	5680.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5817.00†	0.000	180.624	5780.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
5917.00†	0.000	180.624	5880.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6017.00†	0.000	180.624	5980.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6117.00†	0.000	180.624	6080.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6217.00†	0.000	180.624	6180.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6317.00†	0.000	180.624	6280.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6417.00†	0.000	180.624	6380.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6517.00†	0.000	180.624	6480.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6617.00†	0.000	180.624	6580.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6701.05†	0.000	180.624	6665.04	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	4 1/2" LINER TOP
6717.00†	0.000	180.624	6680.99	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	
6801.05	0.000	180.624	6765.05	-215.48	211.29	386.72	40°05'14.795"N	104°41'40.617"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	1.595	180.624	6780.99	-215.26	211.06	386.72	40°05'14.793"N	104°41'40.617"W	10.00	
6917.00†	11.595	180.624	6880.20	-203.79	199.59	386.59	40°05'14.679"N	104°41'40.619"W	10.00	
7017.00†	21.595	180.624	6975.92	-175.27	171.07	386.28	40°05'14.398"N	104°41'40.623"W	10.00	
7024.64†	22.359	180.624	6983.00	-172.41	168.21	386.25	40°05'14.369"N	104°41'40.623"W	10.00	SHARON SPRINGS
7110.89†	30.984	180.624	7060.00	-133.73	129.54	385.83	40°05'13.987"N	104°41'40.629"W	10.00	NIOBRARA A
7117.00†	31.595	180.624	7065.22	-130.56	126.36	385.80	40°05'13.956"N	104°41'40.629"W	10.00	
7126.18†	32.512	180.624	7073.00	-125.69	121.49	385.74	40°05'13.908"N	104°41'40.630"W	10.00	NIOBRARA B
7217.00†	41.595	180.624	7145.41	-71.02	66.83	385.15	40°05'13.367"N	104°41'40.638"W	10.00	
7234.07†	43.301	180.624	7158.00	-59.50	55.31	385.02	40°05'13.254"N	104°41'40.639"W	10.00	NIOBRARA C
7317.00†	51.595	180.624	7214.04	1.54	-5.73	384.36	40°05'12.650"N	104°41'40.648"W	10.00	
7417.00†	61.595	180.624	7269.02	84.91	-89.10	383.45	40°05'11.827"N	104°41'40.660"W	10.00	
7505.64†	70.458	180.624	7305.00	165.82	-170.00	382.57	40°05'11.027"N	104°41'40.671"W	10.00	FORT HAYS



Planned Wellpath Report

ZIEMER 13C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)
Area	COLORADO	Well	ZIEMER 13C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ZIEMER 13C-5HZ PWB
Facility	SEC.05-T1N-R65W		

WELLPATH DATA (137 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7517.00†	71.595	180.624	7308.69	176.57	-180.75	382.45	40°05'10.921"N	104°41'40.672"W	10.00	
7611.38†	81.033	180.624	7331.00	268.17	-272.34	381.46	40°05'10.016"N	104°41'40.685"W	10.00	CODELL
7617.00†	81.595	180.624	7331.85	273.72	-277.89	381.40	40°05'09.961"N	104°41'40.686"W	10.00	
7700.64	89.958	180.624	7338.00	357.06	-361.22	380.49	40°05'09.137"N	104°41'40.698"W	10.00	LANDING POINT
7717.00†	89.958	180.624	7338.01	373.42	-377.58	380.31	40°05'08.976"N	104°41'40.700"W	0.00	
7817.00†	89.958	180.624	7338.09	473.42	-477.58	379.22	40°05'07.987"N	104°41'40.714"W	0.00	
7917.00†	89.958	180.624	7338.16	573.42	-577.57	378.13	40°05'06.999"N	104°41'40.728"W	0.00	
8017.00†	89.958	180.624	7338.23	673.42	-677.57	377.05	40°05'06.011"N	104°41'40.742"W	0.00	
8117.00†	89.958	180.624	7338.31	773.42	-777.56	375.96	40°05'05.023"N	104°41'40.756"W	0.00	
8217.00†	89.958	180.624	7338.38	873.42	-877.55	374.87	40°05'04.035"N	104°41'40.770"W	0.00	
8317.00†	89.958	180.624	7338.45	973.42	-977.55	373.78	40°05'03.047"N	104°41'40.784"W	0.00	
8417.00†	89.958	180.624	7338.52	1073.42	-1077.54	372.69	40°05'02.059"N	104°41'40.798"W	0.00	
8517.00†	89.958	180.624	7338.60	1173.42	-1177.54	371.60	40°05'01.070"N	104°41'40.812"W	0.00	
8617.00†	89.958	180.624	7338.67	1273.42	-1277.53	370.52	40°05'00.082"N	104°41'40.826"W	0.00	
8717.00†	89.958	180.624	7338.74	1373.42	-1377.53	369.43	40°04'59.094"N	104°41'40.840"W	0.00	
8817.00†	89.958	180.624	7338.81	1473.42	-1477.52	368.34	40°04'58.106"N	104°41'40.854"W	0.00	
8917.00†	89.958	180.624	7338.89	1573.42	-1577.51	367.25	40°04'57.118"N	104°41'40.868"W	0.00	
9017.00†	89.958	180.624	7338.96	1673.42	-1677.51	366.16	40°04'56.130"N	104°41'40.882"W	0.00	
9117.00†	89.958	180.624	7339.03	1773.42	-1777.50	365.07	40°04'55.141"N	104°41'40.896"W	0.00	
9217.00†	89.958	180.624	7339.10	1873.42	-1877.50	363.99	40°04'54.153"N	104°41'40.910"W	0.00	
9317.00†	89.958	180.624	7339.18	1973.42	-1977.49	362.90	40°04'53.165"N	104°41'40.924"W	0.00	
9417.00†	89.958	180.624	7339.25	2073.42	-2077.48	361.81	40°04'52.177"N	104°41'40.938"W	0.00	
9517.00†	89.958	180.624	7339.32	2173.42	-2177.48	360.72	40°04'51.189"N	104°41'40.952"W	0.00	
9617.00†	89.958	180.624	7339.39	2273.42	-2277.47	359.63	40°04'50.201"N	104°41'40.966"W	0.00	
9717.00†	89.958	180.624	7339.47	2373.42	-2377.47	358.54	40°04'49.212"N	104°41'40.980"W	0.00	
9817.00†	89.958	180.624	7339.54	2473.42	-2477.46	357.46	40°04'48.224"N	104°41'40.994"W	0.00	
9917.00†	89.958	180.624	7339.61	2573.42	-2577.45	356.37	40°04'47.236"N	104°41'41.008"W	0.00	
10017.00†	89.958	180.624	7339.68	2673.42	-2677.45	355.28	40°04'46.248"N	104°41'41.022"W	0.00	
10117.00†	89.958	180.624	7339.76	2773.42	-2777.44	354.19	40°04'45.260"N	104°41'41.037"W	0.00	
10217.00†	89.958	180.624	7339.83	2873.42	-2877.44	353.10	40°04'44.272"N	104°41'41.051"W	0.00	
10317.00†	89.958	180.624	7339.90	2973.42	-2977.43	352.01	40°04'43.283"N	104°41'41.065"W	0.00	
10417.00†	89.958	180.624	7339.98	3073.42	-3077.42	350.92	40°04'42.295"N	104°41'41.079"W	0.00	
10517.00†	89.958	180.624	7340.05	3173.42	-3177.42	349.84	40°04'41.307"N	104°41'41.093"W	0.00	
10617.00†	89.958	180.624	7340.12	3273.42	-3277.41	348.75	40°04'40.319"N	104°41'41.107"W	0.00	
10717.00†	89.958	180.624	7340.19	3373.42	-3377.41	347.66	40°04'39.331"N	104°41'41.121"W	0.00	
10817.00†	89.958	180.624	7340.27	3473.42	-3477.40	346.57	40°04'38.343"N	104°41'41.135"W	0.00	
10917.00†	89.958	180.624	7340.34	3573.42	-3577.39	345.48	40°04'37.355"N	104°41'41.149"W	0.00	
11017.00†	89.958	180.624	7340.41	3673.42	-3677.39	344.39	40°04'36.366"N	104°41'41.163"W	0.00	
11117.00†	89.958	180.624	7340.48	3773.42	-3777.38	343.31	40°04'35.378"N	104°41'41.177"W	0.00	
11217.00†	89.958	180.624	7340.56	3873.42	-3877.38	342.22	40°04'34.390"N	104°41'41.191"W	0.00	
11317.00†	89.958	180.624	7340.63	3973.42	-3977.37	341.13	40°04'33.402"N	104°41'41.205"W	0.00	
11417.00†	89.958	180.624	7340.70	4073.42	-4077.36	340.04	40°04'32.414"N	104°41'41.219"W	0.00	
11517.00†	89.958	180.624	7340.77	4173.42	-4177.36	338.95	40°04'31.426"N	104°41'41.233"W	0.00	
11617.00†	89.958	180.624	7340.85	4273.42	-4277.35	337.86	40°04'30.437"N	104°41'41.247"W	0.00	
11717.00†	89.958	180.624	7340.92	4373.42	-4377.35	336.78	40°04'29.449"N	104°41'41.261"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)
Area	COLORADO	Well	ZIEMER 13C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ZIEMER 13C-5HZ PWB
Facility	SEC.05-T1N-R65W		

WELLPATH DATA (137 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11817.00†	89.958	180.624	7340.99	4473.42	-4477.34	335.69	40°04'28.461"N	104°41'41.275"W	0.00	
11828.12	89.958	180.624	7341.00 ¹	4484.54	-4488.46	335.57	40°04'28.351"N	104°41'41.276"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: ZIEMER 13C-5HZ PWB Ref Wellpath: ZIEMER 13C-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	1091.00	1074.00	17.00	1091.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1091.00	1074.00	17.00	1091.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1091.00	7700.64	6609.64	1091.00	7338.00	0.00	0.00	-361.23	380.49
7in Casing Intermediate	17.00	7700.64	7683.64	17.00	7338.00	0.00	0.00	-361.23	380.49
6.125in Open Hole	7700.64	11828.12	4127.48	7338.00	7341.00	-361.23	380.49	-4488.46	335.57
4.5in Casing Production	17.00	11828.12	11811.12	17.00	7341.00	0.00	0.00	-4488.46	335.57

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BOYD PAD HARDLINES LINES (460' SETBACKS SEC.05)		4974.00	-4577.60	2563.83	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W	polygon
BOYD PAD SECTION LINES (SEC.05)		4974.00	-4577.60	2563.83	3227559.17	1270954.76	40°04'27.469"N	104°41'12.613"W	polygon
1) ZIEMER 13C-5HZ BHL ON PLAT REV-1 (460'FSL & 690'FWL, SEC.05)	11828.12	7341.00	-4488.46	335.57	3225330.29	1271023.69	40°04'28.351"N	104°41'41.276"W	point

SURVEY PROGRAM - Ref Wellbore: ZIEMER 13C-5HZ PWB Ref Wellpath: ZIEMER 13C-5HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	7700.64	NaviTrak (Standard)		ZIEMER 13C-5HZ PWB
7700.64	11828.12	OnTrak (Standard)		ZIEMER 13C-5HZ PWB



Planned Wellpath Report

ZIEMER 13C-5HZ (PERMIT REV-1) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 ZIEMER 13C-5HZ (265'FNL & 309'FWL, SEC.05)
Area	COLORADO	Well	ZIEMER 13C-5HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ZIEMER 13C-5HZ PWB
Facility	SEC.05-T1N-R65W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]		Comment
1041.00	0.000	61.350	1041.00		FOX HILLS BASE
3970.96	10.000	61.350	3940.00		PARKMAN
4504.96	2.630	61.350	4469.00		SUSSEX
6701.05	0.000	180.624	6665.04		4 1/2" LINER TOP
7024.64	22.359	180.624	6983.00		SHARON SPRINGS
7110.89	30.984	180.624	7060.00		NIOBRARA A
7126.18	32.512	180.624	7073.00		NIOBRARA B
7234.07	43.301	180.624	7158.00		NIOBRARA C
7505.64	70.458	180.624	7305.00		FORT HAYS
7611.38	81.033	180.624	7331.00		CODELL