

# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11)  
 Field: WELD COUNTY (KERR MCGEE) Well: GRISWOLD 2C-11HZ  
 Facility: SEC.11-T1N-R66W Wellbore: GRISWOLD 2C-11HZ PWB

Plot reference wellpath is GRISWOLD 2C-11HZ (PERMIT REV-1) PWP

True vertical depths are referenced to PERMT (17KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to PERMT (17KB) (RKB)	North Reference: True north
PERMT (17KB) (RKB) to Mean Sea Level: 5142 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: pccain on 14/Oct/2014

## Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T1N-R66W	3209320.605	1289845.229	40°04'18.091"N	104°45'07.548"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude
SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11)	-4234.02	2785.19	3212141.290	1285635.022
PERMT (17KB) (RKB) to Mud line (At Slot: SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11))	5142ft			
Mean Sea Level to Mud line (At Slot: SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11))	0ft			
PERMT (17KB) (RKB) to Mean Sea Level	5142ft			

## Survey Program

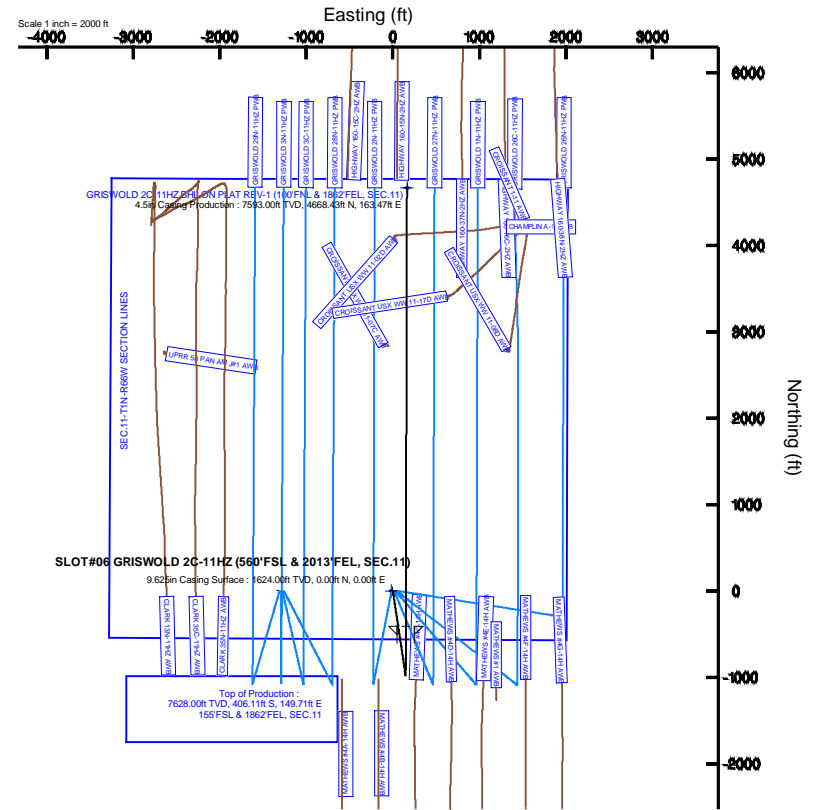
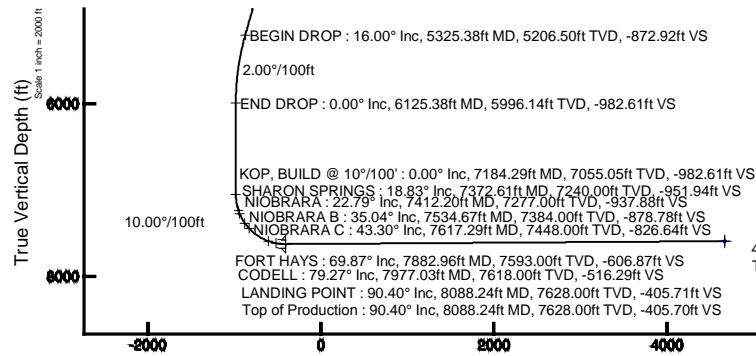
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	13162.92	NaviTrak	NaviTrak (MAGCORR, IFR)		GRISWOLD 2C-11HZ PWB

## 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	171.430	17.00	0.00	0.00	0.00	0.00
BEGIN NUUDGE	1724.00	0.000	171.430	1724.00	0.00	0.00	0.00	0.00
END NUUDGE	2524.00	16.000	171.430	2513.64	-109.74	16.54	2.00	-109.69
BEGIN DROP	5325.38	16.000	171.430	5206.50	-873.28	131.60	0.00	-872.92
END DROP	6125.38	0.000	0.155	5996.14	-983.02	148.14	2.00	-982.61
KOP, BUILD @ 10°/100'	7184.29	0.000	0.155	7055.05	-983.02	148.14	0.00	-982.61
LANDING POINT	8088.24	90.395	0.155	7628.00	-406.11	149.71	10.00	-405.71
TOTAL DEPTH	13162.92	90.395	0.155	7593.00	4668.43	163.47	0.00	4668.85

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T1N-R66W SECTION LINES	0.00	0.00	-15.08	3212126.21	1285634.89	40°03'36.248"N	104°44'31.722"W	
GRISWOLD 2C-11HZ BHL ON PLAT REV-1 (100'FNL & 1862'FEL, SEC.11)	13162.92	7593.00	4668.43	163.47	3212264.85	1270304.49	40°04'22.382"N	104°44'29.425"W



GRISWOLD 2C-11HZ BHL ON PLAT REV-1 (100'FNL & 1862'FEL, SEC.11)  
 4.5in Casing Production : 90.40° Inc, 13162.92ft MD, 7593.00ft TVD, 4668.85ft VS  
 TOTAL DEPTH : 90.40° Inc, 13162.92ft MD, 7593.00ft TVD, 4668.85ft VS

REFERENCE WELLPATH IDENTIFICATION			
Operator	<b>KERR-MCGEE OIL &amp; GAS ONSHORE LP</b>	Slot	<b>SLOT#06 GRISWOLD 2C-11HZ (560'FSL &amp; 2013'FEL, SEC.11)</b>
Area	<b>COLORADO</b>	Well	<b>GRISWOLD 2C-11HZ</b>
Field	<b>WELD COUNTY (KERR MCGEE)</b>	Wellbore	<b>GRISWOLD 2C-11HZ PWB</b>
Facility	<b>SEC.11-T1N-R66W</b>		

REPORT SETUP INFORMATION			
Projection System	<b>NAD83 / Lambert Colorado SP, Northern Zone (501), US feet</b>	Software System	<b>WellArchitect@ 4.0.0</b>
North Reference	<b>True</b>	User	<b>Precain</b>
Scale	<b>0.999962</b>	Report Generated	<b>14/Oct/2014 at 11:16</b>
Convergence at slot	<b>n/a</b>	Database/Source file	<b>WellArchitectDB/GRISWOLD_2C-11HZ_PWB.xml</b>

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4234.02	2785.19	3212141.29	1265635.02	<b>40°03'36.248"N</b>	<b>104°44'31.528"W</b>
Facility Reference Pt			3209320.61	1269845.23	<b>40°04'18.091"N</b>	<b>104°45'07.348"W</b>
Field Reference Pt			<b>3197771.84</b>	<b>1268891.29</b>	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	<b>Minimum curvature</b>	PERMIT (17'KB) (RKB) to Facility Vertical Datum	<b>5142.00ft</b>
Horizontal Reference Pt	<b>Slot</b>	PERMIT (17'KB) (RKB) to Mean Sea Level	<b>5142.00ft</b>
Vertical Reference Pt	<b>PERMIT (17'KB) (RKB)</b>	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11))	<b>5142.00ft</b>
MD Reference Pt	<b>PERMIT (17'KB) (RKB)</b>	Section Origin	<b>N 0.00, E 0.00 ft</b>
Field Vertical Reference	<b>Mean Sea Level</b>	Section Azimuth	<b>0.16°</b>

REFERENCE WELLPATH IDENTIFICATION			
Operator	<b>KERR-MCGEE OIL &amp; GAS ONSHORE LP</b>	Slot	<b>SLOT#06 GRISWOLD 2C-11HZ (560'FSL &amp; 2013'FEL, SEC.11)</b>
Area	<b>COLORADO</b>	Well	<b>GRISWOLD 2C-11HZ</b>
Field	<b>WELD COUNTY (KERR MCGEE)</b>	Wellbore	<b>GRISWOLD 2C-11HZ PWB</b>
Facility	<b>SEC.11-T1N-R66W</b>		

WELLPATH DATA (150 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	171.430	0.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
17.00	0.000	171.430	17.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	TIE ON
117.00†	0.000	171.430	117.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
217.00†	0.000	171.430	217.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
317.00†	0.000	171.430	317.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
417.00†	0.000	171.430	417.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
517.00†	0.000	171.430	517.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
617.00†	0.000	171.430	617.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
717.00†	0.000	171.430	717.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
817.00†	0.000	171.430	817.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
890.00†	0.000	171.430	890.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	BASE FOX HILLS
917.00†	0.000	171.430	917.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1017.00†	0.000	171.430	1017.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1117.00†	0.000	171.430	1117.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1217.00†	0.000	171.430	1217.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1317.00†	0.000	171.430	1317.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1417.00†	0.000	171.430	1417.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1517.00†	0.000	171.430	1517.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1617.00†	0.000	171.430	1617.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1624.00†	0.000	171.430	1624.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	SURFACE CSG SETTING DEPTH
1717.00†	0.000	171.430	1717.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	
1724.00	0.000	171.430	1724.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.528"W	0.00	BEGIN NUDGE
1817.00†	1.860	171.430	1816.98	-1.49	-1.49	0.22	40°03'36.233"N	104°44'31.525"W	2.00	
1917.00†	3.860	171.430	1916.85	-6.42	-6.43	0.97	40°03'36.184"N	104°44'31.516"W	2.00	
2017.00†	5.860	171.430	2016.49	-14.80	-14.80	2.23	40°03'36.102"N	104°44'31.499"W	2.00	
2117.00†	7.860	171.430	2115.77	-26.60	-26.61	4.01	40°03'35.985"N	104°44'31.476"W	2.00	
2217.00†	9.860	171.430	2214.57	-41.83	-41.84	6.31	40°03'35.834"N	104°44'31.447"W	2.00	
2317.00†	11.860	171.430	2312.77	-60.45	-60.47	9.11	40°03'35.650"N	104°44'31.411"W	2.00	
2417.00†	13.860	171.430	2410.26	-82.45	-82.48	12.43	40°03'35.433"N	104°44'31.368"W	2.00	
2517.00†	15.860	171.430	2506.91	-107.79	-107.84	16.25	40°03'35.182"N	104°44'31.319"W	2.00	
2524.00	16.000	171.430	2513.64	-109.69	-109.74	16.54	40°03'35.164"N	104°44'31.315"W	2.00	END NUDGE
2617.00†	16.000	171.430	2603.04	-135.03	-135.09	20.36	40°03'34.913"N	104°44'31.266"W	0.00	
2717.00†	16.000	171.430	2699.17	-162.28	-162.34	24.46	40°03'34.644"N	104°44'31.213"W	0.00	
2817.00†	16.000	171.430	2795.29	-189.52	-189.60	28.57	40°03'34.374"N	104°44'31.161"W	0.00	
2917.00†	16.000	171.430	2891.42	-216.76	-216.85	32.68	40°03'34.105"N	104°44'31.108"W	0.00	
3017.00†	16.000	171.430	2987.54	-244.01	-244.11	36.79	40°03'33.836"N	104°44'31.055"W	0.00	
3117.00†	16.000	171.430	3083.67	-271.25	-271.37	40.89	40°03'33.566"N	104°44'31.002"W	0.00	
3217.00†	16.000	171.430	3179.80	-298.50	-298.62	45.00	40°03'33.297"N	104°44'30.949"W	0.00	
3317.00†	16.000	171.430	3275.92	-325.74	-325.88	49.11	40°03'33.028"N	104°44'30.896"W	0.00	
3417.00†	16.000	171.430	3372.05	-352.99	-353.13	53.22	40°03'32.758"N	104°44'30.844"W	0.00	
3517.00†	16.000	171.430	3468.18	-380.23	-380.39	57.32	40°03'32.489"N	104°44'30.791"W	0.00	
3617.00†	16.000	171.430	3564.30	-407.48	-407.65	61.43	40°03'32.220"N	104°44'30.738"W	0.00	
3717.00†	16.000	171.430	3660.43	-434.72	-434.90	65.54	40°03'31.950"N	104°44'30.685"W	0.00	
3817.00†	16.000	171.430	3756.55	-461.97	-462.16	69.65	40°03'31.681"N	104°44'30.632"W	0.00	
3917.00†	16.000	171.430	3852.68	-489.21	-489.41	73.75	40°03'31.412"N	104°44'30.579"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	<b>KERR-MCGEE OIL &amp; GAS ONSHORE LP</b>	Slot	<b>SLOT#06 GRISWOLD 2C-11HZ (560'FSL &amp; 2013'FEL, SEC.11)</b>
Area	<b>COLORADO</b>	Well	<b>GRISWOLD 2C-11HZ</b>
Field	<b>WELD COUNTY (KERR MCGEE)</b>	Wellbore	<b>GRISWOLD 2C-11HZ PWB</b>
Facility	<b>SEC.11-T1N-R66W</b>		

WELLPATH DATA (150 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4017.00†	16.000	171.430	3948.81	-516.46	-516.67	77.86	40°03'31.142"N	104°44'30.527"W	0.00	
4117.00†	16.000	171.430	4044.93	-543.70	-543.93	81.97	40°03'30.873"N	104°44'30.474"W	0.00	
4217.00†	16.000	171.430	4141.06	-570.95	-571.18	86.08	40°03'30.603"N	104°44'30.421"W	0.00	
4317.00†	16.000	171.430	4237.19	-598.19	-598.44	90.18	40°03'30.334"N	104°44'30.368"W	0.00	
4417.00†	16.000	171.430	4333.31	-625.44	-625.69	94.29	40°03'30.065"N	104°44'30.315"W	0.00	
4488.46†	16.000	171.430	4402.00	-644.90	-645.17	97.23	40°03'29.872"N	104°44'30.278"W	0.00	PARKMAN
4517.00†	16.000	171.430	4429.44	-652.68	-652.95	98.40	40°03'29.795"N	104°44'30.263"W	0.00	
4617.00†	16.000	171.430	4525.56	-679.93	-680.21	102.51	40°03'29.526"N	104°44'30.210"W	0.00	
4717.00†	16.000	171.430	4621.69	-707.17	-707.46	106.61	40°03'29.257"N	104°44'30.157"W	0.00	
4796.39†	16.000	171.430	4698.00	-728.80	-729.10	109.88	40°03'29.043"N	104°44'30.115"W	0.00	SUSSEX
4817.00†	16.000	171.430	4717.82	-734.42	-734.72	110.72	40°03'28.987"N	104°44'30.104"W	0.00	
4917.00†	16.000	171.430	4813.94	-761.66	-761.97	114.83	40°03'28.718"N	104°44'30.051"W	0.00	
5017.00†	16.000	171.430	4910.07	-788.90	-789.23	118.94	40°03'28.449"N	104°44'29.998"W	0.00	
5117.00†	16.000	171.430	5006.19	-816.15	-816.49	123.04	40°03'28.179"N	104°44'29.946"W	0.00	
5217.00†	16.000	171.430	5102.32	-843.39	-843.74	127.15	40°03'27.910"N	104°44'29.893"W	0.00	
5317.00†	16.000	171.430	5198.45	-870.64	-871.00	131.26	40°03'27.641"N	104°44'29.840"W	0.00	
5325.38	16.000	171.430	5206.50	-872.92	-873.28	131.60	40°03'27.618"N	104°44'29.836"W	0.00	BEGIN DROP
5417.00†	14.168	171.430	5294.96	-896.49	-896.86	135.16	40°03'27.385"N	104°44'29.790"W	2.00	
5517.00†	12.168	171.430	5392.33	-919.00	-919.38	138.55	40°03'27.162"N	104°44'29.746"W	2.00	
5617.00†	10.168	171.430	5490.43	-938.15	-938.53	141.44	40°03'26.973"N	104°44'29.709"W	2.00	
5717.00†	8.168	171.430	5589.15	-953.89	-954.29	143.81	40°03'26.818"N	104°44'29.679"W	2.00	
5817.00†	6.168	171.430	5688.36	-966.22	-966.62	145.67	40°03'26.696"N	104°44'29.655"W	2.00	
5917.00†	4.168	171.430	5787.95	-975.13	-975.53	147.01	40°03'26.608"N	104°44'29.637"W	2.00	
6017.00†	2.168	171.430	5887.79	-980.59	-980.99	147.84	40°03'26.554"N	104°44'29.627"W	2.00	
6117.00†	0.168	171.430	5987.77	-982.60	-983.01	148.14	40°03'26.534"N	104°44'29.623"W	2.00	
6125.38	0.000	0.155	5996.14	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	2.00	END DROP
6217.00†	0.000	0.155	6087.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
6317.00†	0.000	0.155	6187.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
6417.00†	0.000	0.155	6287.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
6517.00†	0.000	0.155	6387.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
6617.00†	0.000	0.155	6487.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
6717.00†	0.000	0.155	6587.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
6817.00†	0.000	0.155	6687.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
6917.00†	0.000	0.155	6787.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
7017.00†	0.000	0.155	6887.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
7117.00†	0.000	0.155	6987.77	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	
7184.29	0.000	0.155	7055.05	-982.61	-983.02	148.14	40°03'26.534"N	104°44'29.623"W	0.00	KOP, BUILD @ 10°/100'
7217.00†	3.271	0.155	7087.75	-981.68	-982.09	148.14	40°03'26.543"N	104°44'29.623"W	10.00	
7317.00†	13.271	0.155	7186.58	-967.31	-967.72	148.18	40°03'26.685"N	104°44'29.622"W	10.00	
7372.61†	18.832	0.155	7240.00	-951.94	-952.35	148.22	40°03'26.837"N	104°44'29.622"W	10.00	SHARON SPRINGS
7412.20†	22.791	0.155	7277.00	-937.88	-938.28	148.26	40°03'26.976"N	104°44'29.621"W	10.00	NIOBRARA
7417.00†	23.271	0.155	7281.42	-936.00	-936.41	148.27	40°03'26.994"N	104°44'29.621"W	10.00	
7517.00†	33.271	0.155	7369.38	-888.70	-889.10	148.40	40°03'27.462"N	104°44'29.620"W	10.00	
7534.67†	35.038	0.155	7384.00	-878.78	-879.18	148.42	40°03'27.560"N	104°44'29.619"W	10.00	NIOBRARA B
7617.00†	43.271	0.155	7447.79	-826.84	-827.24	148.56	40°03'28.073"N	104°44'29.617"W	10.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 2C-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 2C-11HZ PWB
Facility	SEC.11-T1N-R66W		

WELLPATH DATA (150 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
7617.29†	43.300	0.155	7448.00	-826.64	-827.04	148.56	40°03'28.075"N	104°44'29.617"W	10.00	NIOBRARA C	
7717.00†	53.271	0.155	7514.26	-752.30	-752.71	148.77	40°03'28.810"N	104°44'29.615"W	10.00		
7817.00†	63.271	0.155	7566.79	-667.35	-667.76	149.00	40°03'29.649"N	104°44'29.612"W	10.00		
7882.96†	69.867	0.155	7593.00	-606.87	-607.27	149.16	40°03'30.247"N	104°44'29.610"W	10.00	FORT HAYS	
7917.00†	73.271	0.155	7603.76	-574.58	-574.98	149.25	40°03'30.566"N	104°44'29.609"W	10.00		
7977.03†	79.274	0.155	7618.00	-516.29	-516.70	149.41	40°03'31.142"N	104°44'29.607"W	10.00	CODELL	
8017.00†	83.271	0.155	7624.06	-476.79	-477.20	149.51	40°03'31.532"N	104°44'29.605"W	10.00		
8088.24	90.395	0.155	7628.00	-405.71	-406.11	149.71	40°03'32.235"N	104°44'29.603"W	10.00	LANDING POINT	
8117.00†	90.395	0.155	7627.80	-376.95	-377.35	149.78	40°03'32.519"N	104°44'29.602"W	0.00		
8217.00†	90.395	0.155	7627.11	-276.95	-277.35	150.06	40°03'33.507"N	104°44'29.598"W	0.00		
8317.00†	90.395	0.155	7626.42	-176.95	-177.36	150.33	40°03'34.495"N	104°44'29.595"W	0.00		
8417.00†	90.395	0.155	7625.73	-76.95	-77.36	150.60	40°03'35.484"N	104°44'29.591"W	0.00		
8517.00†	90.395	0.155	7625.04	23.05	22.64	150.87	40°03'36.472"N	104°44'29.588"W	0.00		
8617.00†	90.395	0.155	7624.35	123.04	122.63	151.14	40°03'37.460"N	104°44'29.584"W	0.00		
8717.00†	90.395	0.155	7623.66	223.04	222.63	151.41	40°03'38.448"N	104°44'29.581"W	0.00		
8817.00†	90.395	0.155	7622.97	323.04	322.63	151.68	40°03'39.436"N	104°44'29.577"W	0.00		
8917.00†	90.395	0.155	7622.28	423.04	422.63	151.95	40°03'40.424"N	104°44'29.574"W	0.00		
9017.00†	90.395	0.155	7621.59	523.03	522.62	152.23	40°03'41.413"N	104°44'29.570"W	0.00		
9117.00†	90.395	0.155	7620.90	623.03	622.62	152.50	40°03'42.401"N	104°44'29.567"W	0.00		
9217.00†	90.395	0.155	7620.21	723.03	722.62	152.77	40°03'43.389"N	104°44'29.563"W	0.00		
9317.00†	90.395	0.155	7619.52	823.03	822.62	153.04	40°03'44.377"N	104°44'29.560"W	0.00		
9417.00†	90.395	0.155	7618.83	923.02	922.61	153.31	40°03'45.365"N	104°44'29.556"W	0.00		
9517.00†	90.395	0.155	7618.14	1023.02	1022.61	153.58	40°03'46.354"N	104°44'29.553"W	0.00		
9617.00†	90.395	0.155	7617.45	1123.02	1122.61	153.85	40°03'47.342"N	104°44'29.549"W	0.00		
9717.00†	90.395	0.155	7616.76	1223.02	1222.60	154.12	40°03'48.330"N	104°44'29.546"W	0.00		
9817.00†	90.395	0.155	7616.07	1323.01	1322.60	154.40	40°03'49.318"N	104°44'29.542"W	0.00		
9917.00†	90.395	0.155	7615.39	1423.01	1422.60	154.67	40°03'50.306"N	104°44'29.539"W	0.00		
10017.00†	90.395	0.155	7614.70	1523.01	1522.60	154.94	40°03'51.295"N	104°44'29.535"W	0.00		
10117.00†	90.395	0.155	7614.01	1623.01	1622.59	155.21	40°03'52.283"N	104°44'29.532"W	0.00		
10217.00†	90.395	0.155	7613.32	1723.01	1722.59	155.48	40°03'53.271"N	104°44'29.528"W	0.00		
10317.00†	90.395	0.155	7612.63	1823.00	1822.59	155.75	40°03'54.259"N	104°44'29.525"W	0.00		
10417.00†	90.395	0.155	7611.94	1923.00	1922.59	156.02	40°03'55.247"N	104°44'29.521"W	0.00		
10517.00†	90.395	0.155	7611.25	2023.00	2022.58	156.29	40°03'56.236"N	104°44'29.518"W	0.00		
10617.00†	90.395	0.155	7610.56	2123.00	2122.58	156.57	40°03'57.224"N	104°44'29.514"W	0.00		
10717.00†	90.395	0.155	7609.87	2222.99	2222.58	156.84	40°03'58.212"N	104°44'29.511"W	0.00		
10817.00†	90.395	0.155	7609.18	2322.99	2322.57	157.11	40°03'59.200"N	104°44'29.507"W	0.00		
10917.00†	90.395	0.155	7608.49	2422.99	2422.57	157.38	40°04'00.188"N	104°44'29.504"W	0.00		
11017.00†	90.395	0.155	7607.80	2522.99	2522.57	157.65	40°04'01.177"N	104°44'29.500"W	0.00		
11117.00†	90.395	0.155	7607.11	2622.98	2622.57	157.92	40°04'02.165"N	104°44'29.497"W	0.00		
11217.00†	90.395	0.155	7606.42	2722.98	2722.56	158.19	40°04'03.153"N	104°44'29.493"W	0.00		
11317.00†	90.395	0.155	7605.73	2822.98	2822.56	158.46	40°04'04.141"N	104°44'29.490"W	0.00		
11417.00†	90.395	0.155	7605.04	2922.98	2922.56	158.74	40°04'05.129"N	104°44'29.486"W	0.00		
11517.00†	90.395	0.155	7604.35	3022.97	3022.56	159.01	40°04'06.118"N	104°44'29.483"W	0.00		
11617.00†	90.395	0.155	7603.66	3122.97	3122.55	159.28	40°04'07.106"N	104°44'29.479"W	0.00		
11717.00†	90.395	0.155	7602.97	3222.97	3222.55	159.55	40°04'08.094"N	104°44'29.476"W	0.00		

REFERENCE WELLPATH IDENTIFICATION			
Operator	<b>KERR-MCGEE OIL &amp; GAS ONSHORE LP</b>	Slot	<b>SLOT#06 GRISWOLD 2C-11HZ (560'FSL &amp; 2013'FEL, SEC.11)</b>
Area	<b>COLORADO</b>	Well	<b>GRISWOLD 2C-11HZ</b>
Field	<b>WELD COUNTY (KERR MCGEE)</b>	Wellbore	<b>GRISWOLD 2C-11HZ PWB</b>
Facility	<b>SEC.11-T1N-R66W</b>		

WELLPATH DATA (150 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11817.00†	90.395	0.155	7602.28	3322.97	3322.55	159.82	40°04'09.082"N	104°44'29.472"W	0.00	
11917.00†	90.395	0.155	7601.59	3422.96	3422.54	160.09	40°04'10.070"N	104°44'29.469"W	0.00	
12017.00†	90.395	0.155	7600.90	3522.96	3522.54	160.36	40°04'11.059"N	104°44'29.465"W	0.00	
12117.00†	90.395	0.155	7600.21	3622.96	3622.54	160.64	40°04'12.047"N	104°44'29.462"W	0.00	
12217.00†	90.395	0.155	7599.52	3722.96	3722.54	160.91	40°04'13.035"N	104°44'29.458"W	0.00	
12317.00†	90.395	0.155	7598.83	3822.96	3822.53	161.18	40°04'14.023"N	104°44'29.455"W	0.00	
12417.00†	90.395	0.155	7598.14	3922.95	3922.53	161.45	40°04'15.011"N	104°44'29.451"W	0.00	
12517.00†	90.395	0.155	7597.45	4022.95	4022.53	161.72	40°04'15.999"N	104°44'29.448"W	0.00	
12617.00†	90.395	0.155	7596.76	4122.95	4122.52	161.99	40°04'16.988"N	104°44'29.444"W	0.00	
12717.00†	90.395	0.155	7596.08	4222.95	4222.52	162.26	40°04'17.976"N	104°44'29.441"W	0.00	
12817.00†	90.395	0.155	7595.39	4322.94	4322.52	162.53	40°04'18.964"N	104°44'29.437"W	0.00	
12917.00†	90.395	0.155	7594.70	4422.94	4422.52	162.81	40°04'19.952"N	104°44'29.434"W	0.00	
13017.00†	90.395	0.155	7594.01	4522.94	4522.51	163.08	40°04'20.940"N	104°44'29.430"W	0.00	
13117.00†	90.395	0.155	7593.32	4622.94	4622.51	163.35	40°04'21.929"N	104°44'29.427"W	0.00	
13162.92	90.395	0.155	7593.00 <sup>1</sup>	4668.85	4668.43	163.47	40°04'22.382"N	104°44'29.425"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: GRISWOLD 2C-11HZ PWB Ref Wellpath: GRISWOLD 2C-11HZ (PERMIT REV-1) PWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	17.00	1624.00	1607.00	17.00	1624.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1624.00	1607.00	17.00	1624.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1624.00	8088.24	6464.24	1624.00	7628.00	0.00	0.00	-406.11	149.71
Top of Production	17.00	8088.24	8071.24	17.00	7628.00	0.00	0.00	-406.11	149.71
6.125in Open Hole	8088.24	13162.92	5074.68	7628.00	7593.00	-406.11	149.71	4668.43	163.47
4.5in Casing Production	17.00	13162.92	13145.92	17.00	7593.00	0.00	0.00	4668.43	163.47

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 2C-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 2C-11HZ PWB
Facility	SEC.11-T1N-R66W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.11-T1N-R66W SECTION LINES		0.00	0.00	-15.08	3212126.21	1265634.89	40°03'36.248"N	104°44'31.722"W	polygon
1) GRISWOLD 2C-11HZ BHL ON PLAT REV-1 (100'FNL & 1862'FEL, SEC.11)	13162.92	7593.00	4668.43	163.47	3212264.85	1270304.49	40°04'22.382"N	104°44'29.425"W	point

SURVEY PROGRAM - Ref Wellbore: GRISWOLD 2C-11HZ PWB    Ref Wellpath: GRISWOLD 2C-11HZ (PERMIT REV-1) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	13162.92	NaviTrak (MAGCORR,IFR)		GRISWOLD 2C-11HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 GRISWOLD 2C-11HZ (560'FSL & 2013'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 2C-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 2C-11HZ PWB
Facility	SEC.11-T1N-R66W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
890.00	0.000	171.430	890.00	BASE FOX HILLS	
1624.00	0.000	171.430	1624.00	SURFACE CSG SETTING DEPTH	
4488.46	16.000	171.430	4402.00	PARKMAN	
4796.39	16.000	171.430	4698.00	SUSSEX	
7372.61	18.832	0.155	7240.00	SHARON SPRINGS	
7412.20	22.791	0.155	7277.00	NIOBRARA	
7534.67	35.038	0.155	7384.00	NIOBRARA B	
7617.29	43.300	0.155	7448.00	NIOBRARA C	
7882.96	69.867	0.155	7593.00	FORT HAYS	
7977.03	79.274	0.155	7618.00	CODELL	

DESIGN COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
17.00	0.000	171.430	17.00	TIE ON	
1724.00	0.000	171.430	1724.00	BEGIN NUDGE	
2524.00	16.000	171.430	2513.64	END NUDGE	
5325.38	16.000	171.430	5206.50	BEGIN DROP	
6125.38	0.000	0.155	5996.14	END DROP	
7184.29	0.000	0.155	7055.05	KOP, BUILD @ 10°/100'	
8088.24	90.395	0.155	7628.00	LANDING POINT	
13162.92	90.395	0.155	7593.00	TOTAL DEPTH	