

KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)
 Field: WELD COUNTY (KERR MCGEE) Well: GRISWOLD 1N-11HZ
 Facility: SEC.11-T1N-R66W Wellbore: GRISWOLD 1N-11HZ PWB

Plot reference wellpath is GRISWOLD 1N-11HZ (PERMT 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#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 14/Oct/2014

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T1N-R66W	3209320.605	1269845.229	40°04'18.091"N	104°45'07.548"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Grid North (US ft)
SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)	-4234.02	2815.20	3212171.301	1269535.278
PERMT (17KB) (RKB) to Mud line (At Slot: SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11))	5142ft			
Mean Sea Level to Mud line (At Slot: SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11))	0ft			
PERMT (17KB) (RKB) to Mean Sea Level	5142ft			

Survey Program

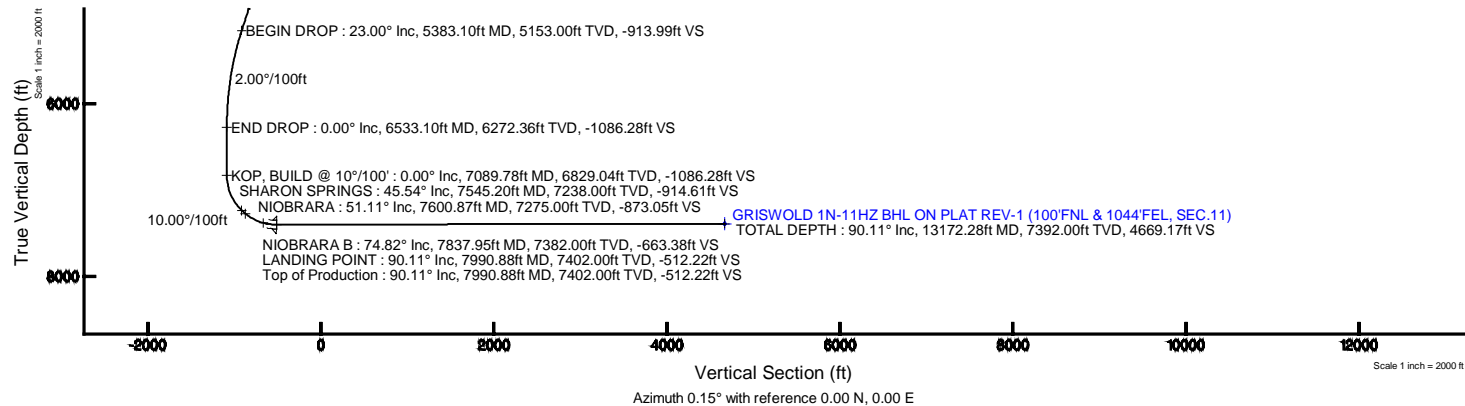
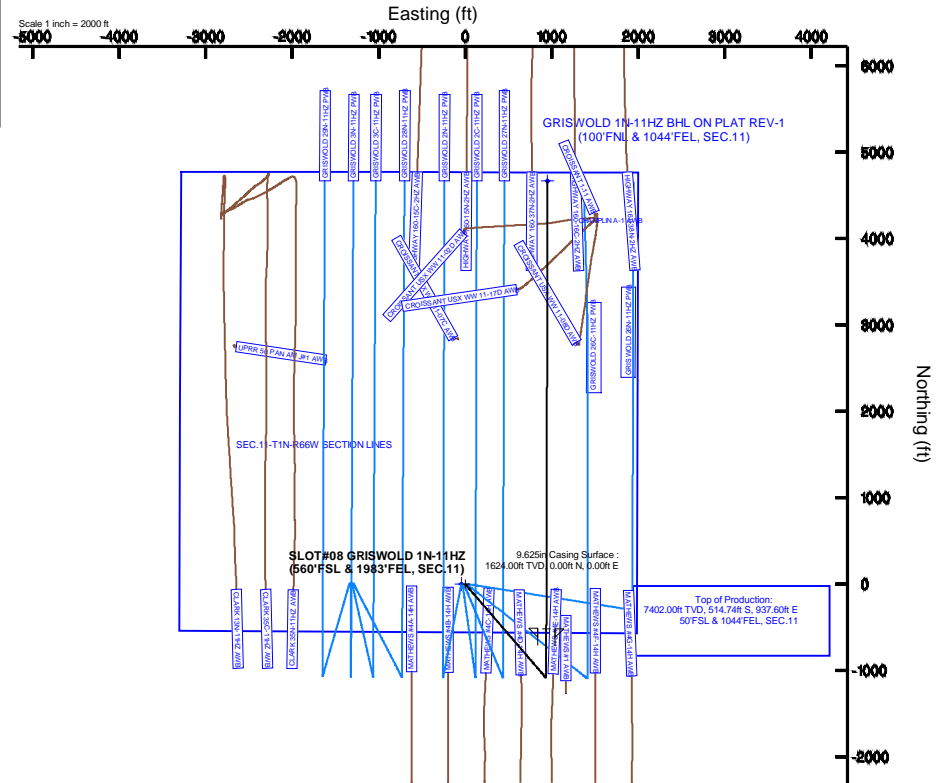
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	13172.28	NaviTrak	NaviTrak (MAGCORR,IFR)		GRISWOLD 1N-11HZ PWB

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	139.314	17.00	0.00	0.00	0.00	0.00
BEGIN NUDDGE	1724.00	0.000	139.314	1724.00	0.00	0.00	0.00	0.00
END NUDDGE	2874.00	23.000	139.314	2843.36	-172.69	148.46	2.00	-172.29
BEGIN DROP	5383.10	23.000	139.314	5153.00	-916.11	787.59	0.00	-913.99
END DROP	6533.10	0.000	0.154	6272.36	-1088.80	936.05	2.00	-1086.28
KOP, BUILD @ 10°/100'	7089.78	0.000	0.154	6829.04	-1088.80	936.05	0.00	-1086.28
LANDING POINT	7990.88	90.111	0.154	7402.00	-514.74	937.60	10.00	-512.22
TOTAL DEPTH	13172.28	90.111	0.154	7392.00	4666.63	951.51	0.00	4669.17

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	-45.10	3212126.21	1266634.89	40°03'36.248"N	104°44'31.722"W	
GRISWOLD 1N-11HZ BHL ON PLAT REV-1 (100'FNL & 1044'FEL, SEC.11)	13172.28	7392.00	4666.63	951.51	3213082.85	1270309.68	40°04'22.364"N	104°44'18.902"W



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 1N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 1N-11HZ PWB
Facility	SEC.11-T1N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect@ 4.0.0
North Reference	True	User	Precain
Scale	0.999962	Report Generated	14/Oct/2014 at 09:44
Convergence at slot	n/a	Database/Source file	WellArchitectDB/GRISWOLD_1N-11HZ_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4234.02	2815.20	3212171.30	1265635.28	40°03'36.248"N	104°44'31.142"W
Facility Reference Pt			3209320.61	1269845.23	40°04'18.091"N	104°45'07.348"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	PERMIT (17'KB) (RKB) to Facility Vertical Datum	5142.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	5142.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11))	5142.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.15°

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Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 1N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 1N-11HZ PWB
Facility	SEC.11-T1N-R66W		

WELLPATH DATA (147 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	139.314	0.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
17.00	0.000	139.314	17.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	TIE ON
117.00†	0.000	139.314	117.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
217.00†	0.000	139.314	217.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
317.00†	0.000	139.314	317.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
417.00†	0.000	139.314	417.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
517.00†	0.000	139.314	517.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
617.00†	0.000	139.314	617.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
717.00†	0.000	139.314	717.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
817.00†	0.000	139.314	817.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
890.00†	0.000	139.314	890.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	BASE FOX HILLS
917.00†	0.000	139.314	917.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1017.00†	0.000	139.314	1017.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1117.00†	0.000	139.314	1117.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1217.00†	0.000	139.314	1217.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1317.00†	0.000	139.314	1317.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1417.00†	0.000	139.314	1417.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1517.00†	0.000	139.314	1517.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1617.00†	0.000	139.314	1617.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1624.00†	0.000	139.314	1624.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	SURFACE CSG SETTING DEPTH
1717.00†	0.000	139.314	1717.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	
1724.00	0.000	139.314	1724.00	0.00	0.00	0.00	40°03'36.248"N	104°44'31.142"W	0.00	BEGIN NUDGE
1817.00†	1.860	139.314	1816.98	-1.14	-1.14	0.98	40°03'36.237"N	104°44'31.129"W	2.00	
1917.00†	3.860	139.314	1916.85	-4.92	-4.93	4.24	40°03'36.199"N	104°44'31.088"W	2.00	
2017.00†	5.860	139.314	2016.49	-11.33	-11.35	9.76	40°03'36.136"N	104°44'31.016"W	2.00	
2117.00†	7.860	139.314	2115.77	-20.36	-20.41	17.55	40°03'36.046"N	104°44'30.916"W	2.00	
2217.00†	9.860	139.314	2214.57	-32.01	-32.09	27.59	40°03'35.931"N	104°44'30.787"W	2.00	
2317.00†	11.860	139.314	2312.77	-46.27	-46.37	39.87	40°03'35.790"N	104°44'30.629"W	2.00	
2417.00†	13.860	139.314	2410.26	-63.10	-63.25	54.38	40°03'35.623"N	104°44'30.443"W	2.00	
2517.00†	15.860	139.314	2506.91	-82.50	-82.70	71.09	40°03'35.431"N	104°44'30.228"W	2.00	
2617.00†	17.860	139.314	2602.61	-104.45	-104.69	90.00	40°03'35.213"N	104°44'29.985"W	2.00	
2717.00†	19.860	139.314	2697.23	-128.90	-129.20	111.07	40°03'34.971"N	104°44'29.713"W	2.00	
2817.00†	21.860	139.314	2790.68	-155.84	-156.20	134.29	40°03'34.704"N	104°44'29.415"W	2.00	
2874.00	23.000	139.314	2843.36	-172.29	-172.69	148.46	40°03'34.541"N	104°44'29.233"W	2.00	END NUDGE
2917.00†	23.000	139.314	2882.94	-185.00	-185.43	159.42	40°03'34.416"N	104°44'29.092"W	0.00	
3017.00†	23.000	139.314	2974.99	-214.56	-215.06	184.89	40°03'34.123"N	104°44'28.764"W	0.00	
3117.00†	23.000	139.314	3067.04	-244.12	-244.69	210.36	40°03'33.830"N	104°44'28.437"W	0.00	
3217.00†	23.000	139.314	3159.10	-273.68	-274.32	235.83	40°03'33.537"N	104°44'28.109"W	0.00	
3317.00†	23.000	139.314	3251.15	-303.24	-303.95	261.31	40°03'33.244"N	104°44'27.781"W	0.00	
3417.00†	23.000	139.314	3343.20	-332.80	-333.58	286.78	40°03'32.952"N	104°44'27.454"W	0.00	
3517.00†	23.000	139.314	3435.25	-362.36	-363.21	312.25	40°03'32.659"N	104°44'27.126"W	0.00	
3617.00†	23.000	139.314	3527.30	-391.92	-392.83	337.72	40°03'32.366"N	104°44'26.799"W	0.00	
3717.00†	23.000	139.314	3619.35	-421.49	-422.46	363.20	40°03'32.073"N	104°44'26.471"W	0.00	
3817.00†	23.000	139.314	3711.40	-451.05	-452.09	388.67	40°03'31.780"N	104°44'26.143"W	0.00	
3917.00†	23.000	139.314	3803.45	-480.61	-481.72	414.14	40°03'31.487"N	104°44'25.816"W	0.00	

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Area	COLORADO	Well	GRISWOLD 1N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 1N-11HZ PWB
Facility	SEC.11-T1N-R66W		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4017.00†	23.000	139.314	3895.50	-510.17	-511.35	439.61	40°03'31.195"N	104°44'25.488"W	0.00	
4117.00†	23.000	139.314	3987.55	-539.73	-540.98	465.09	40°03'30.902"N	104°44'25.161"W	0.00	
4217.00†	23.000	139.314	4079.60	-569.29	-570.61	490.56	40°03'30.609"N	104°44'24.833"W	0.00	
4317.00†	23.000	139.314	4171.65	-598.85	-600.24	516.03	40°03'30.316"N	104°44'24.506"W	0.00	
4417.00†	23.000	139.314	4263.70	-628.41	-629.87	541.50	40°03'30.023"N	104°44'24.178"W	0.00	
4517.00†	23.000	139.314	4355.75	-657.97	-659.49	566.97	40°03'29.731"N	104°44'23.850"W	0.00	
4565.07†	23.000	139.314	4400.00	-672.18	-673.74	579.22	40°03'29.590"N	104°44'23.693"W	0.00	PARKMAN
4617.00†	23.000	139.314	4447.80	-687.53	-689.12	592.45	40°03'29.438"N	104°44'23.523"W	0.00	
4717.00†	23.000	139.314	4539.85	-717.09	-718.75	617.92	40°03'29.145"N	104°44'23.195"W	0.00	
4817.00†	23.000	139.314	4631.90	-746.65	-748.38	643.39	40°03'28.852"N	104°44'22.868"W	0.00	
4886.63†	23.000	139.314	4696.00	-767.23	-769.01	661.13	40°03'28.648"N	104°44'22.640"W	0.00	SUSSEX
4917.00†	23.000	139.314	4723.95	-776.21	-778.01	668.86	40°03'28.559"N	104°44'22.540"W	0.00	
5017.00†	23.000	139.314	4816.00	-805.77	-807.64	694.34	40°03'28.267"N	104°44'22.213"W	0.00	
5117.00†	23.000	139.314	4908.05	-835.33	-837.27	719.81	40°03'27.974"N	104°44'21.885"W	0.00	
5217.00†	23.000	139.314	5000.11	-864.89	-866.90	745.28	40°03'27.681"N	104°44'21.557"W	0.00	
5317.00†	23.000	139.314	5092.16	-894.45	-896.53	770.75	40°03'27.388"N	104°44'21.230"W	0.00	
5383.10	23.000	139.314	5153.00	-913.99	-916.11	787.59	40°03'27.195"N	104°44'21.013"W	0.00	BEGIN DROP
5417.00†	22.322	139.314	5184.28	-923.87	-926.01	796.10	40°03'27.097"N	104°44'20.904"W	2.00	
5517.00†	20.322	139.314	5277.43	-951.38	-953.58	819.81	40°03'26.824"N	104°44'20.599"W	2.00	
5617.00†	18.322	139.314	5371.80	-976.41	-978.67	841.38	40°03'26.576"N	104°44'20.322"W	2.00	
5717.00†	16.322	139.314	5467.26	-998.93	-1001.25	860.79	40°03'26.353"N	104°44'20.072"W	2.00	
5817.00†	14.322	139.314	5563.70	-1018.92	-1021.29	878.01	40°03'26.155"N	104°44'19.850"W	2.00	
5917.00†	12.322	139.314	5661.00	-1036.35	-1038.76	893.03	40°03'25.983"N	104°44'19.657"W	2.00	
6017.00†	10.322	139.314	5759.05	-1051.21	-1053.64	905.83	40°03'25.835"N	104°44'19.493"W	2.00	
6117.00†	8.322	139.314	5857.72	-1063.46	-1065.93	916.39	40°03'25.714"N	104°44'19.357"W	2.00	
6217.00†	6.322	139.314	5956.90	-1073.10	-1075.59	924.70	40°03'25.619"N	104°44'19.250"W	2.00	
6317.00†	4.322	139.314	6056.47	-1080.12	-1082.62	930.74	40°03'25.549"N	104°44'19.172"W	2.00	
6417.00†	2.322	139.314	6156.30	-1084.50	-1087.02	934.52	40°03'25.506"N	104°44'19.124"W	2.00	
6517.00†	0.322	139.314	6256.26	-1086.25	-1088.77	936.02	40°03'25.488"N	104°44'19.104"W	2.00	
6533.10	0.000	0.154	6272.36	-1086.28	-1088.80	936.05	40°03'25.488"N	104°44'19.104"W	2.00	END DROP
6617.00†	0.000	0.154	6356.26	-1086.28	-1088.80	936.05	40°03'25.488"N	104°44'19.104"W	0.00	
6717.00†	0.000	0.154	6456.26	-1086.28	-1088.80	936.05	40°03'25.488"N	104°44'19.104"W	0.00	
6817.00†	0.000	0.154	6556.26	-1086.28	-1088.80	936.05	40°03'25.488"N	104°44'19.104"W	0.00	
6917.00†	0.000	0.154	6656.26	-1086.28	-1088.80	936.05	40°03'25.488"N	104°44'19.104"W	0.00	
7017.00†	0.000	0.154	6756.26	-1086.28	-1088.80	936.05	40°03'25.488"N	104°44'19.104"W	0.00	
7089.78	0.000	0.154	6829.04	-1086.28	-1088.80	936.05	40°03'25.488"N	104°44'19.104"W	0.00	KOP, BUILD @ 10°/100'
7117.00†	2.722	0.154	6856.25	-1085.63	-1088.15	936.06	40°03'25.494"N	104°44'19.104"W	10.00	
7217.00†	12.722	0.154	6955.22	-1072.21	-1074.73	936.09	40°03'25.627"N	104°44'19.104"W	10.00	
7317.00†	22.722	0.154	7050.35	-1041.81	-1044.33	936.17	40°03'25.927"N	104°44'19.102"W	10.00	
7417.00†	32.722	0.154	7138.76	-995.35	-997.87	936.30	40°03'26.387"N	104°44'19.101"W	10.00	
7517.00†	42.722	0.154	7217.76	-934.25	-936.77	936.46	40°03'26.990"N	104°44'19.099"W	10.00	
7545.20†	45.542	0.154	7238.00	-914.61	-917.13	936.51	40°03'27.184"N	104°44'19.098"W	10.00	SHARON SPRINGS
7600.87†	51.109	0.154	7275.00	-873.05	-875.57	936.63	40°03'27.595"N	104°44'19.097"W	10.00	NIOBRARA
7617.00†	52.722	0.154	7284.95	-860.35	-862.87	936.66	40°03'27.721"N	104°44'19.096"W	10.00	
7717.00†	62.722	0.154	7338.28	-775.91	-778.43	936.89	40°03'28.555"N	104°44'19.093"W	10.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 1N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 1N-11HZ PWB
Facility	SEC.11-T1N-R66W		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7817.00†	72.722	0.154	7376.15	-683.50	-686.02	937.14	40°03'29.468"N	104°44'19.090"W	10.00	
7837.95†	74.817	0.154	7382.00	-663.38	-665.90	937.19	40°03'29.667"N	104°44'19.089"W	10.00	NIOBRARA B
7917.00†	82.722	0.154	7397.38	-585.91	-588.43	937.40	40°03'30.433"N	104°44'19.086"W	10.00	
7990.88	90.111	0.154	7402.00	-512.22	-514.74	937.60	40°03'31.161"N	104°44'19.084"W	10.00	LANDING POINT
8017.00†	90.111	0.154	7401.95	-486.10	-488.62	937.67	40°03'31.419"N	104°44'19.083"W	0.00	
8117.00†	90.111	0.154	7401.76	-386.10	-388.62	937.93	40°03'32.407"N	104°44'19.079"W	0.00	
8217.00†	90.111	0.154	7401.56	-286.10	-288.63	938.20	40°03'33.396"N	104°44'19.076"W	0.00	
8317.00†	90.111	0.154	7401.37	-186.10	-188.63	938.47	40°03'34.384"N	104°44'19.072"W	0.00	
8417.00†	90.111	0.154	7401.18	-86.10	-88.63	938.74	40°03'35.372"N	104°44'19.069"W	0.00	
8517.00†	90.111	0.154	7400.98	13.90	11.37	939.01	40°03'36.360"N	104°44'19.065"W	0.00	
8617.00†	90.111	0.154	7400.79	113.90	111.37	939.28	40°03'37.348"N	104°44'19.062"W	0.00	
8717.00†	90.111	0.154	7400.60	213.90	211.37	939.55	40°03'38.337"N	104°44'19.058"W	0.00	
8817.00†	90.111	0.154	7400.40	313.90	311.37	939.81	40°03'39.325"N	104°44'19.055"W	0.00	
8917.00†	90.111	0.154	7400.21	413.90	411.37	940.08	40°03'40.313"N	104°44'19.051"W	0.00	
9017.00†	90.111	0.154	7400.02	513.90	511.37	940.35	40°03'41.301"N	104°44'19.048"W	0.00	
9117.00†	90.111	0.154	7399.83	613.90	611.37	940.62	40°03'42.290"N	104°44'19.044"W	0.00	
9217.00†	90.111	0.154	7399.63	713.90	711.37	940.89	40°03'43.278"N	104°44'19.041"W	0.00	
9317.00†	90.111	0.154	7399.44	813.90	811.37	941.16	40°03'44.266"N	104°44'19.037"W	0.00	
9417.00†	90.111	0.154	7399.25	913.90	911.37	941.43	40°03'45.254"N	104°44'19.034"W	0.00	
9517.00†	90.111	0.154	7399.05	1013.89	1011.37	941.69	40°03'46.242"N	104°44'19.030"W	0.00	
9617.00†	90.111	0.154	7398.86	1113.89	1111.37	941.96	40°03'47.231"N	104°44'19.027"W	0.00	
9717.00†	90.111	0.154	7398.67	1213.89	1211.37	942.23	40°03'48.219"N	104°44'19.023"W	0.00	
9817.00†	90.111	0.154	7398.47	1313.89	1311.37	942.50	40°03'49.207"N	104°44'19.020"W	0.00	
9917.00†	90.111	0.154	7398.28	1413.89	1411.37	942.77	40°03'50.195"N	104°44'19.016"W	0.00	
10017.00†	90.111	0.154	7398.09	1513.89	1511.36	943.04	40°03'51.183"N	104°44'19.013"W	0.00	
10117.00†	90.111	0.154	7397.90	1613.89	1611.36	943.31	40°03'52.172"N	104°44'19.009"W	0.00	
10217.00†	90.111	0.154	7397.70	1713.89	1711.36	943.57	40°03'53.160"N	104°44'19.006"W	0.00	
10317.00†	90.111	0.154	7397.51	1813.89	1811.36	943.84	40°03'54.148"N	104°44'19.002"W	0.00	
10417.00†	90.111	0.154	7397.32	1913.89	1911.36	944.11	40°03'55.136"N	104°44'18.999"W	0.00	
10517.00†	90.111	0.154	7397.12	2013.89	2011.36	944.38	40°03'56.125"N	104°44'18.995"W	0.00	
10617.00†	90.111	0.154	7396.93	2113.89	2111.36	944.65	40°03'57.113"N	104°44'18.992"W	0.00	
10717.00†	90.111	0.154	7396.74	2213.89	2211.36	944.92	40°03'58.101"N	104°44'18.988"W	0.00	
10817.00†	90.111	0.154	7396.55	2313.89	2311.36	945.19	40°03'59.089"N	104°44'18.985"W	0.00	
10917.00†	90.111	0.154	7396.35	2413.89	2411.36	945.45	40°04'00.077"N	104°44'18.981"W	0.00	
11017.00†	90.111	0.154	7396.16	2513.89	2511.36	945.72	40°04'01.066"N	104°44'18.978"W	0.00	
11117.00†	90.111	0.154	7395.97	2613.89	2611.36	945.99	40°04'02.054"N	104°44'18.974"W	0.00	
11217.00†	90.111	0.154	7395.77	2713.89	2711.36	946.26	40°04'03.042"N	104°44'18.971"W	0.00	
11317.00†	90.111	0.154	7395.58	2813.89	2811.36	946.53	40°04'04.030"N	104°44'18.967"W	0.00	
11417.00†	90.111	0.154	7395.39	2913.89	2911.36	946.80	40°04'05.018"N	104°44'18.964"W	0.00	
11517.00†	90.111	0.154	7395.19	3013.89	3011.36	947.07	40°04'06.007"N	104°44'18.960"W	0.00	
11617.00†	90.111	0.154	7395.00	3113.89	3111.36	947.33	40°04'06.995"N	104°44'18.957"W	0.00	
11717.00†	90.111	0.154	7394.81	3213.89	3211.36	947.60	40°04'07.983"N	104°44'18.953"W	0.00	
11817.00†	90.111	0.154	7394.62	3313.89	3311.35	947.87	40°04'08.971"N	104°44'18.950"W	0.00	
11917.00†	90.111	0.154	7394.42	3413.89	3411.35	948.14	40°04'09.960"N	104°44'18.946"W	0.00	
12017.00†	90.111	0.154	7394.23	3513.89	3511.35	948.41	40°04'10.948"N	104°44'18.943"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 1N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 1N-11HZ PWB
Facility	SEC.11-T1N-R66W		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.111	0.154	7394.04	3613.89	3611.35	948.68	40°04'11.936"N	104°44'18.939"W	0.00	
12217.00†	90.111	0.154	7393.84	3713.89	3711.35	948.95	40°04'12.924"N	104°44'18.936"W	0.00	
12317.00†	90.111	0.154	7393.65	3813.89	3811.35	949.21	40°04'13.912"N	104°44'18.932"W	0.00	
12417.00†	90.111	0.154	7393.46	3913.89	3911.35	949.48	40°04'14.901"N	104°44'18.929"W	0.00	
12517.00†	90.111	0.154	7393.26	4013.89	4011.35	949.75	40°04'15.889"N	104°44'18.925"W	0.00	
12617.00†	90.111	0.154	7393.07	4113.89	4111.35	950.02	40°04'16.877"N	104°44'18.922"W	0.00	
12717.00†	90.111	0.154	7392.88	4213.89	4211.35	950.29	40°04'17.865"N	104°44'18.918"W	0.00	
12817.00†	90.111	0.154	7392.69	4313.89	4311.35	950.56	40°04'18.853"N	104°44'18.915"W	0.00	
12917.00†	90.111	0.154	7392.49	4413.89	4411.35	950.83	40°04'19.842"N	104°44'18.911"W	0.00	
13017.00†	90.111	0.154	7392.30	4513.89	4511.35	951.09	40°04'20.830"N	104°44'18.908"W	0.00	
13117.00†	90.111	0.154	7392.11	4613.89	4611.35	951.36	40°04'21.818"N	104°44'18.904"W	0.00	
13172.28	90.111	0.154	7392.00 ¹	4669.17	4666.63	951.51	40°04'22.364"N	104°44'18.902"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: GRISWOLD 1N-11HZ PWB Ref Wellpath: GRISWOLD 1N-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	7990.88	6366.88	1624.00	7402.00	0.00	0.00	-514.74	937.60
Top of Production	17.00	7990.88	7973.88	17.00	7402.00	0.00	0.00	-514.74	937.60
6.125in Open Hole	7990.88	13172.28	5181.40	7402.00	NA	-514.74	937.60	NA	NA
4.5in Casing Production	17.00	13172.28	13155.28	17.00	NA	0.00	0.00	NA	NA

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	-45.10	3212126.21	1265634.89	40°03'36.248"N	104°44'31.722"W	polygon
1) GRISWOLD 1N-11HZ BHL ON PLAT REV-1 (100'FNL & 1044'FEL, SEC.11)	13172.28	7392.00	4666.63	951.51	3213082.85	1270309.68	40°04'22.364"N	104°44'18.902"W	point

SURVEY PROGRAM - Ref Wellbore: GRISWOLD 1N-11HZ PWB Ref Wellpath: GRISWOLD 1N-11HZ (PERMIT REV-1) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	13172.28	NaviTrak (MAGCORR,IFR)		GRISWOLD 1N-11HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 GRISWOLD 1N-11HZ (560'FSL & 1983'FEL, SEC.11)
Area	COLORADO	Well	GRISWOLD 1N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 1N-11HZ PWB
Facility	SEC.11-T1N-R66W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
890.00	0.000	139.314	890.00	BASE FOX HILLS	
1624.00	0.000	139.314	1624.00	SURFACE CSG SETTING DEPTH	
4565.07	23.000	139.314	4400.00	PARKMAN	
4886.63	23.000	139.314	4696.00	SUSSEX	
7545.20	45.542	0.154	7238.00	SHARON SPRINGS	
7600.87	51.109	0.154	7275.00	NIOBRARA	
7837.95	74.817	0.154	7382.00	NIOBRARA B	

DESIGN COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
17.00	0.000	139.314	17.00	TIE ON	
1724.00	0.000	139.314	1724.00	BEGIN NUDGE	
2874.00	23.000	139.314	2843.36	END NUDGE	
5383.10	23.000	139.314	5153.00	BEGIN DROP	
6533.10	0.000	0.154	6272.36	END DROP	
7089.78	0.000	0.154	6829.04	KOP, BUILD @ 10°/100'	
7990.88	90.111	0.154	7402.00	LANDING POINT	
13172.28	90.111	0.154	7392.00	TOTAL DEPTH	