



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRISWOLD 3N-11HZ (560'FSL & 1983'FWL, SEC.11)
Area	COLORADO	Well	GRISWOLD 3N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 3N-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	Amarcar
Scale	0.999962	Report Generated	10/14/2014 at 10:39:44 AM
Convergence at slot	n/a	Database/Source file	WellArchitectDB/GRISWOLD_3N-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	-4227.55	1492.82	3210848.97	1265630.59	40°03'36.313"N	104°44'48.149"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	5159.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	5159.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#14 GRISWOLD 3N-11HZ (560'FSL & 1983'FWL, SEC.11))	5159.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.28°

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Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 3N-11HZ PWB
Facility	SEC.11-T1N-R66W		

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	179.910	0.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
17.00	0.000	179.910	17.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	TIE ON
117.00†	0.000	179.910	117.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
217.00†	0.000	179.910	217.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
317.00†	0.000	179.910	317.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
417.00†	0.000	179.910	417.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
517.00†	0.000	179.910	517.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
617.00†	0.000	179.910	617.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
717.00†	0.000	179.910	717.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
817.00†	0.000	179.910	817.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
907.00†	0.000	179.910	907.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	BASE FOX HILLS
917.00†	0.000	179.910	917.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1017.00†	0.000	179.910	1017.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1117.00†	0.000	179.910	1117.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1217.00†	0.000	179.910	1217.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1317.00†	0.000	179.910	1317.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1417.00†	0.000	179.910	1417.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1517.00†	0.000	179.910	1517.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1617.00†	0.000	179.910	1617.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1641.00†	0.000	179.910	1641.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	SURFACE CSG SETTING DEPTH
1717.00†	0.000	179.910	1717.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	
1741.00	0.000	179.910	1741.00	0.00	0.00	0.00	40°03'36.313"N	104°44'48.149"W	0.00	BEGIN NUDGE
1817.00†	1.520	179.910	1816.99	-1.01	-1.01	0.00	40°03'36.303"N	104°44'48.149"W	2.00	
1917.00†	3.520	179.910	1916.89	-5.40	-5.40	0.01	40°03'36.260"N	104°44'48.149"W	2.00	
2017.00†	5.520	179.910	2016.57	-13.28	-13.28	0.02	40°03'36.182"N	104°44'48.149"W	2.00	
2117.00†	7.520	179.910	2115.92	-24.64	-24.64	0.04	40°03'36.070"N	104°44'48.149"W	2.00	
2217.00†	9.520	179.910	2214.81	-39.45	-39.45	0.06	40°03'35.923"N	104°44'48.148"W	2.00	
2317.00†	11.520	179.910	2313.13	-57.71	-57.71	0.09	40°03'35.743"N	104°44'48.148"W	2.00	
2417.00†	13.520	179.910	2410.74	-79.39	-79.39	0.12	40°03'35.528"N	104°44'48.147"W	2.00	
2517.00†	15.520	179.910	2507.55	-104.46	-104.46	0.16	40°03'35.281"N	104°44'48.147"W	2.00	
2541.00	16.000	179.910	2530.64	-110.97	-110.98	0.17	40°03'35.216"N	104°44'48.147"W	2.00	END NUDGE
2617.00†	16.000	179.910	2603.70	-131.92	-131.93	0.21	40°03'35.009"N	104°44'48.146"W	0.00	
2717.00†	16.000	179.910	2699.82	-159.49	-159.49	0.25	40°03'34.737"N	104°44'48.146"W	0.00	
2817.00†	16.000	179.910	2795.95	-187.05	-187.05	0.29	40°03'34.465"N	104°44'48.145"W	0.00	
2917.00†	16.000	179.910	2892.08	-214.61	-214.62	0.34	40°03'34.192"N	104°44'48.145"W	0.00	
3017.00†	16.000	179.910	2988.20	-242.18	-242.18	0.38	40°03'33.920"N	104°44'48.144"W	0.00	
3117.00†	16.000	179.910	3084.33	-269.74	-269.74	0.42	40°03'33.647"N	104°44'48.144"W	0.00	
3217.00†	16.000	179.910	3180.46	-297.30	-297.31	0.47	40°03'33.375"N	104°44'48.143"W	0.00	
3317.00†	16.000	179.910	3276.58	-324.86	-324.87	0.51	40°03'33.103"N	104°44'48.142"W	0.00	
3417.00†	16.000	179.910	3372.71	-352.43	-352.43	0.55	40°03'32.830"N	104°44'48.142"W	0.00	
3517.00†	16.000	179.910	3468.83	-379.99	-380.00	0.60	40°03'32.558"N	104°44'48.141"W	0.00	
3617.00†	16.000	179.910	3564.96	-407.55	-407.56	0.64	40°03'32.285"N	104°44'48.141"W	0.00	
3717.00†	16.000	179.910	3661.09	-435.12	-435.13	0.68	40°03'32.013"N	104°44'48.140"W	0.00	
3817.00†	16.000	179.910	3757.21	-462.68	-462.69	0.73	40°03'31.741"N	104°44'48.140"W	0.00	
3917.00†	16.000	179.910	3853.34	-490.24	-490.25	0.77	40°03'31.468"N	104°44'48.139"W	0.00	

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Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 3N-11HZ PWB
Facility	SEC.11-T1N-R66W		

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
4017.00†	16.000	179.910	3949.47	-517.81	-517.82	0.81	40°03'31.196"N	104°44'48.139"W	0.00	
4117.00†	16.000	179.910	4045.59	-545.37	-545.38	0.86	40°03'30.923"N	104°44'48.138"W	0.00	
4217.00†	16.000	179.910	4141.72	-572.93	-572.94	0.90	40°03'30.651"N	104°44'48.137"W	0.00	
4317.00†	16.000	179.910	4237.84	-600.50	-600.51	0.94	40°03'30.379"N	104°44'48.137"W	0.00	
4417.00†	16.000	179.910	4333.97	-628.06	-628.07	0.99	40°03'30.106"N	104°44'48.136"W	0.00	
4498.17†	16.000	179.910	4412.00	-650.43	-650.45	1.02	40°03'29.885"N	104°44'48.136"W	0.00	PARKMAN
4517.00†	16.000	179.910	4430.10	-655.62	-655.64	1.03	40°03'29.834"N	104°44'48.136"W	0.00	
4617.00†	16.000	179.910	4526.22	-683.19	-683.20	1.07	40°03'29.561"N	104°44'48.135"W	0.00	
4717.00†	16.000	179.910	4622.35	-710.75	-710.76	1.12	40°03'29.289"N	104°44'48.135"W	0.00	
4806.10†	16.000	179.910	4708.00	-735.31	-735.32	1.16	40°03'29.046"N	104°44'48.134"W	0.00	SUSSEX
4817.00†	16.000	179.910	4718.47	-738.31	-738.33	1.16	40°03'29.017"N	104°44'48.134"W	0.00	
4917.00†	16.000	179.910	4814.60	-765.88	-765.89	1.20	40°03'28.744"N	104°44'48.134"W	0.00	
5017.00†	16.000	179.910	4910.73	-793.44	-793.45	1.25	40°03'28.472"N	104°44'48.133"W	0.00	
5117.00†	16.000	179.910	5006.85	-821.00	-821.02	1.29	40°03'28.200"N	104°44'48.132"W	0.00	
5217.00†	16.000	179.910	5102.98	-848.57	-848.58	1.33	40°03'27.927"N	104°44'48.132"W	0.00	
5317.00†	16.000	179.910	5199.11	-876.13	-876.15	1.38	40°03'27.655"N	104°44'48.131"W	0.00	
5417.00†	16.000	179.910	5295.23	-903.69	-903.71	1.42	40°03'27.382"N	104°44'48.131"W	0.00	
5517.00†	16.000	179.910	5391.36	-931.25	-931.27	1.46	40°03'27.110"N	104°44'48.130"W	0.00	
5617.00†	16.000	179.910	5487.48	-958.82	-958.84	1.51	40°03'26.838"N	104°44'48.130"W	0.00	
5673.71	16.000	179.910	5542.00	-974.45	-974.47	1.53	40°03'26.683"N	104°44'48.129"W	0.00	BEGIN DROP
5717.00†	15.134	179.910	5583.70	-986.07	-986.09	1.55	40°03'26.568"N	104°44'48.129"W	2.00	
5817.00†	13.134	179.910	5680.67	-1010.48	-1010.50	1.59	40°03'26.327"N	104°44'48.129"W	2.00	
5917.00†	11.134	179.910	5778.43	-1031.50	-1031.52	1.62	40°03'26.119"N	104°44'48.128"W	2.00	
6017.00†	9.134	179.910	5876.86	-1049.10	-1049.12	1.65	40°03'25.945"N	104°44'48.128"W	2.00	
6117.00†	7.134	179.910	5975.85	-1063.25	-1063.27	1.67	40°03'25.806"N	104°44'48.128"W	2.00	
6217.00†	5.134	179.910	6075.27	-1073.93	-1073.95	1.69	40°03'25.700"N	104°44'48.127"W	2.00	
6317.00†	3.134	179.910	6175.01	-1081.14	-1081.16	1.70	40°03'25.629"N	104°44'48.127"W	2.00	
6417.00†	1.134	179.910	6274.93	-1084.86	-1084.88	1.70	40°03'25.592"N	104°44'48.127"W	2.00	
6473.71	0.000	0.279	6331.64	-1085.42	-1085.45	1.71	40°03'25.586"N	104°44'48.127"W	2.00	END DROP
6517.00†	0.000	0.279	6374.93	-1085.42	-1085.45	1.71	40°03'25.586"N	104°44'48.127"W	0.00	
6617.00†	0.000	0.279	6474.93	-1085.42	-1085.45	1.71	40°03'25.586"N	104°44'48.127"W	0.00	
6717.00†	0.000	0.279	6574.93	-1085.42	-1085.45	1.71	40°03'25.586"N	104°44'48.127"W	0.00	
6817.00†	0.000	0.279	6674.93	-1085.42	-1085.45	1.71	40°03'25.586"N	104°44'48.127"W	0.00	
6917.00†	0.000	0.279	6774.93	-1085.42	-1085.45	1.71	40°03'25.586"N	104°44'48.127"W	0.00	
6983.11	0.000	0.279	6841.04	-1085.42	-1085.45	1.71	40°03'25.586"N	104°44'48.127"W	0.00	KOP, BUILD @ 10°/100'
7017.00†	3.389	0.279	6874.91	-1084.42	-1084.44	1.71	40°03'25.596"N	104°44'48.127"W	10.00	
7117.00†	13.389	0.279	6973.71	-1069.85	-1069.87	1.78	40°03'25.740"N	104°44'48.126"W	10.00	
7217.00†	23.389	0.279	7068.49	-1038.35	-1038.37	1.93	40°03'26.052"N	104°44'48.124"W	10.00	
7317.00†	33.389	0.279	7156.35	-990.86	-990.88	2.17	40°03'26.521"N	104°44'48.121"W	10.00	
7417.00†	43.389	0.279	7234.63	-928.84	-928.86	2.47	40°03'27.134"N	104°44'48.117"W	10.00	
7438.53†	45.542	0.279	7250.00	-913.76	-913.78	2.54	40°03'27.283"N	104°44'48.116"W	10.00	SHARON SPRINGS
7494.20†	51.109	0.279	7287.00	-872.19	-872.22	2.74	40°03'27.694"N	104°44'48.114"W	10.00	NIOBRARA
7517.00†	53.389	0.279	7300.96	-854.17	-854.19	2.83	40°03'27.872"N	104°44'48.113"W	10.00	
7617.00†	63.389	0.279	7353.30	-769.11	-769.14	3.24	40°03'28.712"N	104°44'48.107"W	10.00	
7717.00†	73.389	0.279	7390.09	-676.26	-676.29	3.70	40°03'29.630"N	104°44'48.101"W	10.00	

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7731.28†	74.817	0.279	7394.00	-662.53	-662.56	3.76	40°03'29.765"N	104°44'48.101"W	10.00	NIOBRARA B
7817.00†	83.389	0.279	7410.19	-578.43	-578.46	4.17	40°03'30.597"N	104°44'48.095"W	10.00	
7885.33	90.221	0.279	7414.00	-510.25	-510.28	4.50	40°03'31.270"N	104°44'48.091"W	10.00	LANDING POINT
7917.00†	90.221	0.279	7413.87	-478.58	-478.61	4.66	40°03'31.583"N	104°44'48.089"W	0.00	
8017.00†	90.221	0.279	7413.49	-378.58	-378.61	5.14	40°03'32.571"N	104°44'48.083"W	0.00	
8117.00†	90.221	0.279	7413.10	-278.58	-278.61	5.63	40°03'33.560"N	104°44'48.077"W	0.00	
8217.00†	90.221	0.279	7412.71	-178.58	-178.61	6.12	40°03'34.548"N	104°44'48.070"W	0.00	
8317.00†	90.221	0.279	7412.33	-78.58	-78.62	6.60	40°03'35.536"N	104°44'48.064"W	0.00	
8417.00†	90.221	0.279	7411.94	21.42	21.38	7.09	40°03'36.524"N	104°44'48.058"W	0.00	
8517.00†	90.221	0.279	7411.56	121.42	121.38	7.58	40°03'37.513"N	104°44'48.052"W	0.00	
8617.00†	90.221	0.279	7411.17	221.41	221.38	8.06	40°03'38.501"N	104°44'48.045"W	0.00	
8717.00†	90.221	0.279	7410.78	321.41	321.38	8.55	40°03'39.489"N	104°44'48.039"W	0.00	
8817.00†	90.221	0.279	7410.40	421.41	421.37	9.04	40°03'40.477"N	104°44'48.033"W	0.00	
8917.00†	90.221	0.279	7410.01	521.41	521.37	9.52	40°03'41.465"N	104°44'48.027"W	0.00	
9017.00†	90.221	0.279	7409.62	621.41	621.37	10.01	40°03'42.454"N	104°44'48.020"W	0.00	
9117.00†	90.221	0.279	7409.24	721.41	721.37	10.50	40°03'43.442"N	104°44'48.014"W	0.00	
9217.00†	90.221	0.279	7408.85	821.41	821.37	10.98	40°03'44.430"N	104°44'48.008"W	0.00	
9317.00†	90.221	0.279	7408.46	921.41	921.36	11.47	40°03'45.418"N	104°44'48.001"W	0.00	
9417.00†	90.221	0.279	7408.08	1021.41	1021.36	11.96	40°03'46.406"N	104°44'47.995"W	0.00	
9517.00†	90.221	0.279	7407.69	1121.41	1121.36	12.44	40°03'47.395"N	104°44'47.989"W	0.00	
9617.00†	90.221	0.279	7407.31	1221.41	1221.36	12.93	40°03'48.383"N	104°44'47.983"W	0.00	
9717.00†	90.221	0.279	7406.92	1321.41	1321.36	13.41	40°03'49.371"N	104°44'47.976"W	0.00	
9817.00†	90.221	0.279	7406.53	1421.41	1421.36	13.90	40°03'50.359"N	104°44'47.970"W	0.00	
9917.00†	90.221	0.279	7406.15	1521.41	1521.35	14.39	40°03'51.347"N	104°44'47.964"W	0.00	
10017.00†	90.221	0.279	7405.76	1621.40	1621.35	14.87	40°03'52.336"N	104°44'47.958"W	0.00	
10117.00†	90.221	0.279	7405.37	1721.40	1721.35	15.36	40°03'53.324"N	104°44'47.951"W	0.00	
10217.00†	90.221	0.279	7404.99	1821.40	1821.35	15.85	40°03'54.312"N	104°44'47.945"W	0.00	
10317.00†	90.221	0.279	7404.60	1921.40	1921.35	16.33	40°03'55.300"N	104°44'47.939"W	0.00	
10417.00†	90.221	0.279	7404.21	2021.40	2021.34	16.82	40°03'56.288"N	104°44'47.933"W	0.00	
10517.00†	90.221	0.279	7403.83	2121.40	2121.34	17.31	40°03'57.277"N	104°44'47.926"W	0.00	
10617.00†	90.221	0.279	7403.44	2221.40	2221.34	17.79	40°03'58.265"N	104°44'47.920"W	0.00	
10717.00†	90.221	0.279	7403.06	2321.40	2321.34	18.28	40°03'59.253"N	104°44'47.914"W	0.00	
10817.00†	90.221	0.279	7402.67	2421.40	2421.34	18.77	40°04'00.241"N	104°44'47.908"W	0.00	
10917.00†	90.221	0.279	7402.28	2521.40	2521.33	19.25	40°04'01.229"N	104°44'47.901"W	0.00	
11017.00†	90.221	0.279	7401.90	2621.40	2621.33	19.74	40°04'02.218"N	104°44'47.895"W	0.00	
11117.00†	90.221	0.279	7401.51	2721.40	2721.33	20.23	40°04'03.206"N	104°44'47.889"W	0.00	
11217.00†	90.221	0.279	7401.12	2821.40	2821.33	20.71	40°04'04.194"N	104°44'47.883"W	0.00	
11317.00†	90.221	0.279	7400.74	2921.39	2921.33	21.20	40°04'05.182"N	104°44'47.876"W	0.00	
11417.00†	90.221	0.279	7400.35	3021.39	3021.32	21.69	40°04'06.170"N	104°44'47.870"W	0.00	
11517.00†	90.221	0.279	7399.96	3121.39	3121.32	22.17	40°04'07.159"N	104°44'47.864"W	0.00	
11617.00†	90.221	0.279	7399.58	3221.39	3221.32	22.66	40°04'08.147"N	104°44'47.858"W	0.00	
11717.00†	90.221	0.279	7399.19	3321.39	3321.32	23.15	40°04'09.135"N	104°44'47.851"W	0.00	
11817.00†	90.221	0.279	7398.80	3421.39	3421.32	23.63	40°04'10.123"N	104°44'47.845"W	0.00	
11917.00†	90.221	0.279	7398.42	3521.39	3521.31	24.12	40°04'11.111"N	104°44'47.839"W	0.00	
12017.00†	90.221	0.279	7398.03	3621.39	3621.31	24.60	40°04'12.100"N	104°44'47.833"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRISWOLD 3N-11HZ (560'FSL & 1983'FWL, SEC.11)
Area	COLORADO	Well	GRISWOLD 3N-11HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 3N-11HZ PWB
Facility	SEC.11-T1N-R66W		

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
12117.00†	90.221	0.279	7397.65	3721.39	3721.31	25.09	40°04'13.088"N	104°44'47.826"W	0.00	
12217.00†	90.221	0.279	7397.26	3821.39	3821.31	25.58	40°04'14.076"N	104°44'47.820"W	0.00	
12317.00†	90.221	0.279	7396.87	3921.39	3921.31	26.06	40°04'15.064"N	104°44'47.814"W	0.00	
12417.00†	90.221	0.279	7396.49	4021.39	4021.30	26.55	40°04'16.052"N	104°44'47.807"W	0.00	
12517.00†	90.221	0.279	7396.10	4121.39	4121.30	27.04	40°04'17.041"N	104°44'47.801"W	0.00	
12617.00†	90.221	0.279	7395.71	4221.38	4221.30	27.52	40°04'18.029"N	104°44'47.795"W	0.00	
12717.00†	90.221	0.279	7395.33	4321.38	4321.30	28.01	40°04'19.017"N	104°44'47.789"W	0.00	
12817.00†	90.221	0.279	7394.94	4421.38	4421.30	28.50	40°04'20.005"N	104°44'47.782"W	0.00	
12917.00†	90.221	0.279	7394.55	4521.38	4521.30	28.98	40°04'20.993"N	104°44'47.776"W	0.00	
13017.00†	90.221	0.279	7394.17	4621.38	4621.29	29.47	40°04'21.982"N	104°44'47.770"W	0.00	
13060.47	90.221	0.279	7394.00 ¹	4664.85	4664.77	29.68	40°04'22.411"N	104°44'47.767"W	0.00	TOTAL DEPTH; NIOBRARA B

HOLE & CASING SECTIONS -

Ref Wellbore: GRISWOLD 3N-11HZ PWB Ref Wellpath: GRISWOLD 3N-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	1641.00	1624.00	17.00	1641.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1641.00	1624.00	17.00	1641.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1641.00	7885.33	6244.33	1641.00	7414.00	0.00	0.00	-510.28	4.50
7in Casing Intermediate	17.00	7885.33	7868.33	17.00	7414.00	0.00	0.00	-510.28	4.50
6.125in Open Hole	7885.33	13060.47	5175.14	7414.00	7394.00	-510.28	4.50	4664.76	29.68
4.5in Casing Production	17.00	13060.47	13043.47	17.00	7394.00	0.00	0.00	4664.76	29.68

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		17.00	-6.54	1277.28	3212126.21	1265634.89	40°03'36.248"N	104°44'31.722"W	polygon
1) GRISWOLD 3N-11HZ BHL ON PLAT REV-1 (100'FNL & 1990'FWL, SEC.11)	13060.47	7394.00	4664.77	29.68	3210839.02	1270295.25	40°04'22.411"N	104°44'47.767"W	point

SURVEY PROGRAM - Ref Wellbore: GRISWOLD 3N-11HZ PWB Ref Wellpath: GRISWOLD 3N-11HZ (PERMIT REV-1) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	13060.47	NaviTrak (MAGCORR,IFR)		GRISWOLD 3N-11HZ PWB

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRISWOLD 3N-11HZ (560'FSL & 1983'FWL, SEC.11)	
Area	COLORADO	Well	GRISWOLD 3N-11HZ	
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRISWOLD 3N-11HZ PWB	
Facility	SEC.11-T1N-R66W			

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
907.00	0.000	179.910	907.00	BASE FOX HILLS
1641.00	0.000	179.910	1641.00	SURFACE CSG SETTING DEPTH
4498.17	16.000	179.910	4412.00	PARKMAN
4806.10	16.000	179.910	4708.00	SUSSEX
7438.53	45.542	0.279	7250.00	SHARON SPRINGS
7494.20	51.109	0.279	7287.00	NIOBRARA
7731.28	74.817	0.279	7394.00	NIOBRARA B
13060.47	90.221	0.279	7394.00	NIOBRARA B

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	179.910	17.00	TIE ON
1741.00	0.000	179.910	1741.00	BEGIN NUDGE
2541.00	16.000	179.910	2530.64	END NUDGE
5673.71	16.000	179.910	5542.00	BEGIN DROP
6473.71	0.000	0.279	6331.64	END DROP
6983.11	0.000	0.279	6841.04	KOP, BUILD @ 10°/100'
7885.33	90.221	0.279	7414.00	LANDING POINT
13060.47	90.221	0.279	7394.00	TOTAL DEPTH