

KERR-MCGEE OIL & GAS ONSHORE LP

Location: Compass Import Slot: SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)
Field: WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH) Well: CARTER 13N-33HZ
Facility: SEC.33-T2N-R66W Wellbore: CARTER 13N-33HZ PWB

Plot reference wellpath is CARTER 13N-33HZ (PERMIT REV-1) PWP	
True vertical depths are referenced to PERMIT (17KB) (RKB)	Grid System: NAD83 / UTM Zone 13 North, US feet
Measured depths are referenced to PERMIT (17KB) (RKB)	North Reference: True north
PERMIT (17KB) (RKB) to Mean Sea Level: 4976 feet	Scale: Grid distance
Mean Sea Level to Mud line (At Slot: SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robiale01 on 12/12/2014

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.33-T2N-R66W	1702750.847	14562570.870	40°05'53.524"N	104°46'37.556"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)	502.97	-2683.51	1700066.092	14563067.116
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33))	4976ft			
Mean Sea Level to Mud line (At Slot: SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33))	0ft			
PERMIT (17KB) (RKB) to Mean Sea Level	4976ft			

Survey Program

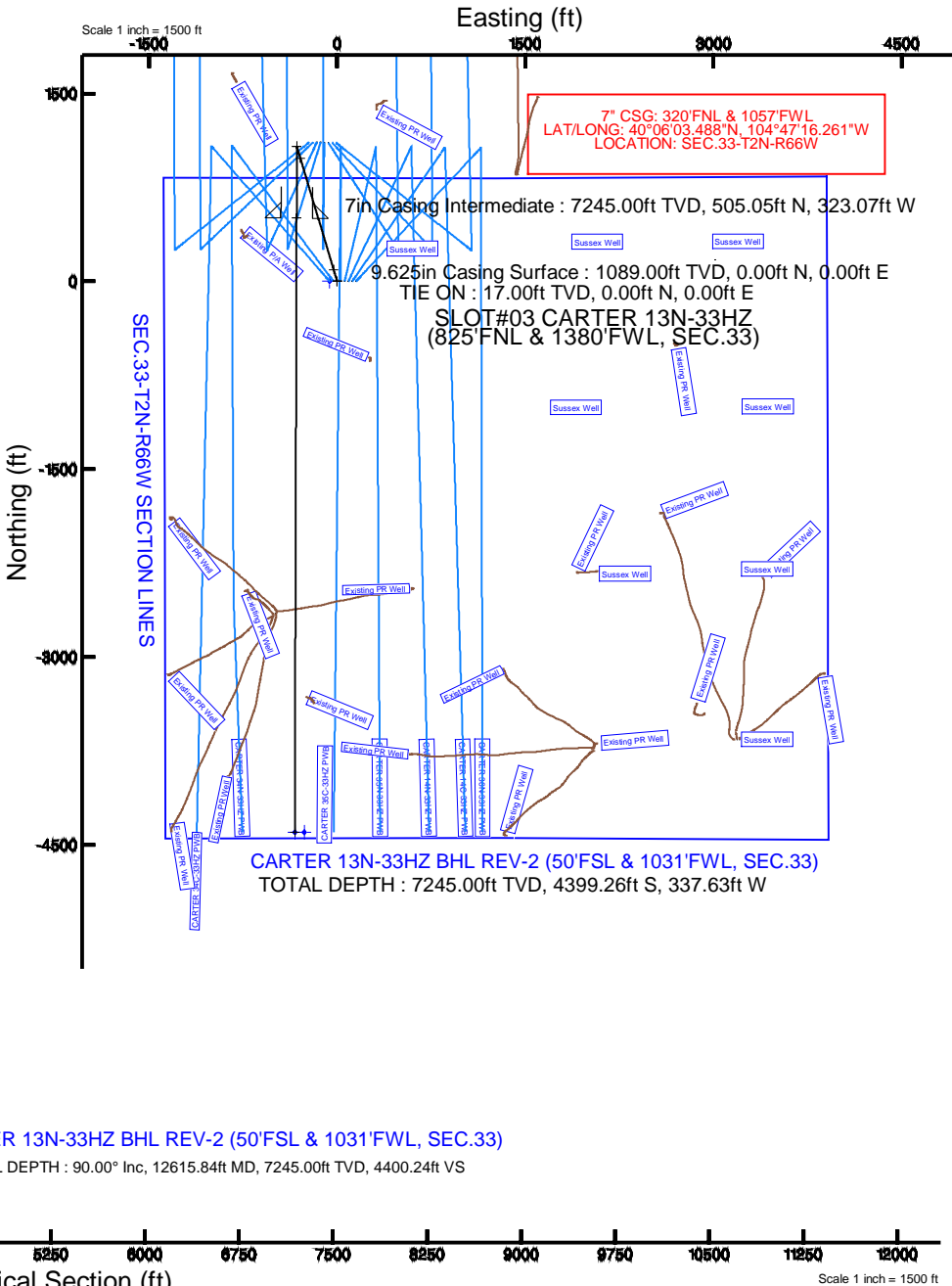
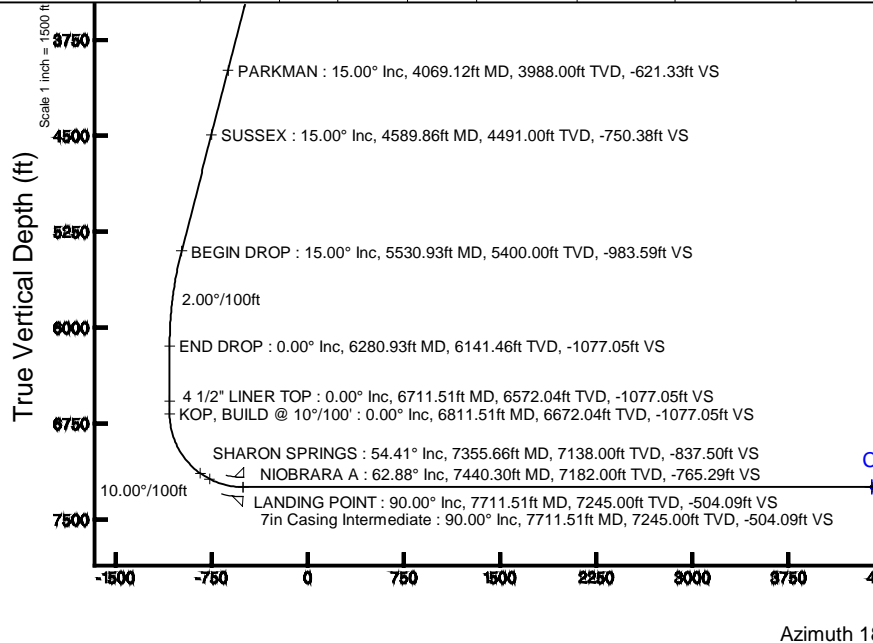
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	12615.84	ISCWSA MWD, Rev. 2, axial magnetic correction	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (Mag/IAR IFR Wattenberg)		CARTER 13N-33HZ PWB

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.33-T2N-R66W SECTION LINES		0.00	0.40	-59.81	1700066.28	14563067.38	40°05'58.499"N	104°47'12.872"W
CARTER 13N-33HZ BHL REV-2 (50'FSL & 1031'FWL, SEC.33)	12615.84	7245.00	-4399.26	-337.63	1699739.01	14558667.07	40°05'15.004"N	104°47'16.448"W

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	343.400	17.00	0.00	0.00	0.00	0.00
BEGIN NUUDGE	1189.00	0.000	343.400	1189.00	0.00	0.00	0.00	0.00
END NUUDGE	1939.00	15.000	343.400	1930.46	93.55	-27.89	2.00	-93.46
BEGIN DROP	5530.93	15.000	343.400	5400.00	984.46	-293.48	0.00	-983.59
END DROP	6280.93	0.000	180.170	6141.46	1078.01	-321.37	2.00	-1077.05
KOP, BUILD @ 10°/100'	6811.51	0.000	180.170	6672.04	1078.01	-321.37	0.00	-1077.05
LANDING POINT	7711.51	90.000	180.170	7245.00	505.05	-323.07	10.00	-504.09
TOTAL DEPTH	12615.84	90.000	180.170	7245.00	-4399.26	-337.63	0.00	4400.24



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)
Area	Compass Import	Well	CARTER 13N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 13N-33HZ PWB
Facility	SEC.33-T2N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Robiale01
Scale	0.999604	Report Generated	12/12/2014 at 2:15:32 PM
Convergence at slot	n/a	Database/Source file	WellArchitectDB/CARTER_13N-33HZ_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	502.97	-2683.51	1700066.09	14563067.12	40°05'58.495"N	104°47'12.102"W
Facility Reference Pt			1702750.85	14562570.87	40°05'53.524"N	104°46'37.556"W
Field Reference Pt			1700626.56	14568707.73	40°06'54.245"N	104°47'04.711"W

WELLPATH DATUM			
Calculation method	Minimum curvature	PERMIT (17'KB) (RKB) to 2N-66W-33 Offsets vertical datum	4976.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	4976.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33))	4976.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.17°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)
Area	Compass Import	Well	CARTER 13N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 13N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (140 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	343.400	0.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
17.00	0.000	343.400	17.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	TIE ON
117.00†	0.000	343.400	117.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
217.00†	0.000	343.400	217.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
317.00†	0.000	343.400	317.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
417.00†	0.000	343.400	417.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
517.00†	0.000	343.400	517.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
617.00†	0.000	343.400	617.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
717.00†	0.000	343.400	717.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
817.00†	0.000	343.400	817.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
917.00†	0.000	343.400	917.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
1017.00†	0.000	343.400	1017.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
1039.00†	0.000	343.400	1039.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	FOX HILLS BASE
1117.00†	0.000	343.400	1117.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	
1189.00	0.000	343.400	1189.00	0.00	0.00	0.00	40°05'58.495"N	104°47'12.102"W	0.00	BEGIN NUDGE
1217.00†	0.560	343.400	1217.00	-0.13	0.13	-0.04	40°05'58.496"N	104°47'12.103"W	2.00	
1317.00†	2.560	343.400	1316.96	-2.74	2.74	-0.82	40°05'58.522"N	104°47'12.113"W	2.00	
1417.00†	4.560	343.400	1416.76	-8.68	8.69	-2.59	40°05'58.581"N	104°47'12.135"W	2.00	
1517.00†	6.560	343.400	1516.28	-17.96	17.97	-5.36	40°05'58.673"N	104°47'12.171"W	2.00	
1617.00†	8.560	343.400	1615.41	-30.56	30.58	-9.12	40°05'58.797"N	104°47'12.219"W	2.00	
1717.00†	10.560	343.400	1714.02	-46.46	46.50	-13.86	40°05'58.955"N	104°47'12.280"W	2.00	
1817.00†	12.560	343.400	1811.98	-65.64	65.70	-19.59	40°05'59.145"N	104°47'12.354"W	2.00	
1917.00†	14.560	343.400	1909.19	-88.09	88.17	-26.28	40°05'59.367"N	104°47'12.440"W	2.00	
1939.00	15.000	343.400	1930.46	-93.46	93.55	-27.89	40°05'59.420"N	104°47'12.461"W	2.00	END NUDGE
2017.00†	15.000	343.400	2005.80	-112.79	112.89	-33.66	40°05'59.611"N	104°47'12.535"W	0.00	
2117.00†	15.000	343.400	2102.40	-137.57	137.70	-41.05	40°05'59.856"N	104°47'12.630"W	0.00	
2217.00†	15.000	343.400	2198.99	-162.36	162.50	-48.44	40°06'00.101"N	104°47'12.726"W	0.00	
2317.00†	15.000	343.400	2295.58	-187.14	187.30	-55.84	40°06'00.347"N	104°47'12.821"W	0.00	
2417.00†	15.000	343.400	2392.17	-211.92	212.11	-63.23	40°06'00.592"N	104°47'12.916"W	0.00	
2517.00†	15.000	343.400	2488.77	-236.70	236.91	-70.63	40°06'00.837"N	104°47'13.011"W	0.00	
2617.00†	15.000	343.400	2585.36	-261.48	261.71	-78.02	40°06'01.082"N	104°47'13.106"W	0.00	
2717.00†	15.000	343.400	2681.95	-286.26	286.52	-85.41	40°06'01.328"N	104°47'13.202"W	0.00	
2817.00†	15.000	343.400	2778.54	-311.04	311.32	-92.81	40°06'01.573"N	104°47'13.297"W	0.00	
2917.00†	15.000	343.400	2875.14	-335.82	336.12	-100.20	40°06'01.818"N	104°47'13.392"W	0.00	
3017.00†	15.000	343.400	2971.73	-360.60	360.93	-107.60	40°06'02.063"N	104°47'13.487"W	0.00	
3117.00†	15.000	343.400	3068.32	-385.39	385.73	-114.99	40°06'02.308"N	104°47'13.582"W	0.00	
3217.00†	15.000	343.400	3164.92	-410.17	410.53	-122.38	40°06'02.554"N	104°47'13.678"W	0.00	
3317.00†	15.000	343.400	3261.51	-434.95	435.34	-129.78	40°06'02.799"N	104°47'13.773"W	0.00	
3417.00†	15.000	343.400	3358.10	-459.73	460.14	-137.17	40°06'03.044"N	104°47'13.868"W	0.00	
3517.00†	15.000	343.400	3454.69	-484.51	484.94	-144.57	40°06'03.289"N	104°47'13.963"W	0.00	
3617.00†	15.000	343.400	3551.29	-509.29	509.74	-151.96	40°06'03.534"N	104°47'14.058"W	0.00	
3717.00†	15.000	343.400	3647.88	-534.07	534.55	-159.36	40°06'03.780"N	104°47'14.154"W	0.00	
3817.00†	15.000	343.400	3744.47	-558.85	559.35	-166.75	40°06'04.025"N	104°47'14.249"W	0.00	
3917.00†	15.000	343.400	3841.06	-583.64	584.15	-174.14	40°06'04.270"N	104°47'14.344"W	0.00	
4017.00†	15.000	343.400	3937.66	-608.42	608.96	-181.54	40°06'04.515"N	104°47'14.439"W	0.00	

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Area	Compass Import	Well	CARTER 13N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 13N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4069.12†	15.000	343.400	3988.00	-621.33	621.89	-185.39	40°06'04.643"N	104°47'14.489"W	0.00	PARKMAN
4117.00†	15.000	343.400	4034.25	-633.20	633.76	-188.93	40°06'04.760"N	104°47'14.534"W	0.00	
4217.00†	15.000	343.400	4130.84	-657.98	658.56	-196.33	40°06'05.006"N	104°47'14.629"W	0.00	
4317.00†	15.000	343.400	4227.43	-682.76	683.37	-203.72	40°06'05.251"N	104°47'14.725"W	0.00	
4417.00†	15.000	343.400	4324.03	-707.54	708.17	-211.11	40°06'05.496"N	104°47'14.820"W	0.00	
4517.00†	15.000	343.400	4420.62	-732.32	732.97	-218.51	40°06'05.741"N	104°47'14.915"W	0.00	
4589.86†	15.000	343.400	4491.00	-750.38	751.05	-223.90	40°06'05.920"N	104°47'14.984"W	0.00	SUSSEX
4617.00†	15.000	343.400	4517.21	-757.10	757.78	-225.90	40°06'05.986"N	104°47'15.010"W	0.00	
4717.00†	15.000	343.400	4613.80	-781.88	782.58	-233.30	40°06'06.232"N	104°47'15.105"W	0.00	
4817.00†	15.000	343.400	4710.40	-806.67	807.38	-240.69	40°06'06.477"N	104°47'15.201"W	0.00	
4917.00†	15.000	343.400	4806.99	-831.45	832.19	-248.09	40°06'06.722"N	104°47'15.296"W	0.00	
5017.00†	15.000	343.400	4903.58	-856.23	856.99	-255.48	40°06'06.967"N	104°47'15.391"W	0.00	
5117.00†	15.000	343.400	5000.17	-881.01	881.79	-262.87	40°06'07.212"N	104°47'15.486"W	0.00	
5217.00†	15.000	343.400	5096.77	-905.79	906.60	-270.27	40°06'07.458"N	104°47'15.581"W	0.00	
5317.00†	15.000	343.400	5193.36	-930.57	931.40	-277.66	40°06'07.703"N	104°47'15.677"W	0.00	
5417.00†	15.000	343.400	5289.95	-955.35	956.20	-285.06	40°06'07.948"N	104°47'15.772"W	0.00	
5517.00†	15.000	343.400	5386.54	-980.13	981.01	-292.45	40°06'08.193"N	104°47'15.867"W	0.00	
5530.93	15.000	343.400	5400.00	-983.59	984.46	-293.48	40°06'08.227"N	104°47'15.880"W	0.00	BEGIN DROP
5617.00†	13.279	343.400	5483.46	-1003.72	1004.61	-299.49	40°06'08.427"N	104°47'15.958"W	2.00	
5717.00†	11.279	343.400	5581.17	-1024.08	1024.99	-305.56	40°06'08.628"N	104°47'16.036"W	2.00	
5817.00†	9.279	343.400	5679.56	-1041.16	1042.09	-310.66	40°06'08.797"N	104°47'16.101"W	2.00	
5917.00†	7.279	343.400	5778.51	-1054.95	1055.89	-314.77	40°06'08.934"N	104°47'16.154"W	2.00	
6017.00†	5.279	343.400	5877.91	-1065.42	1066.37	-317.90	40°06'09.037"N	104°47'16.195"W	2.00	
6117.00†	3.279	343.400	5977.62	-1072.56	1073.51	-320.03	40°06'09.108"N	104°47'16.222"W	2.00	
6217.00†	1.279	343.400	6077.54	-1076.37	1077.32	-321.16	40°06'09.145"N	104°47'16.237"W	2.00	
6280.93	0.000	180.170	6141.46	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	2.00	END DROP
6317.00†	0.000	180.170	6177.53	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	0.00	
6417.00†	0.000	180.170	6277.53	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	0.00	
6517.00†	0.000	180.170	6377.53	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	0.00	
6617.00†	0.000	180.170	6477.53	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	0.00	
6711.51†	0.000	180.170	6572.04	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	0.00	4 1/2" LINER TOP
6717.00†	0.000	180.170	6577.53	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	0.00	
6811.51	0.000	180.170	6672.04	-1077.05	1078.01	-321.37	40°06'09.152"N	104°47'16.239"W	0.00	KOP, BUILD @ 10°/100'
6817.00†	0.549	180.170	6677.53	-1077.02	1077.98	-321.37	40°06'09.152"N	104°47'16.239"W	10.00	
6917.00†	10.549	180.170	6776.94	-1067.37	1068.32	-321.40	40°06'09.057"N	104°47'16.240"W	10.00	
7017.00†	20.549	180.170	6873.15	-1040.59	1041.55	-321.48	40°06'08.792"N	104°47'16.241"W	10.00	
7117.00†	30.549	180.170	6963.26	-997.52	998.48	-321.60	40°06'08.366"N	104°47'16.242"W	10.00	
7217.00†	40.549	180.170	7044.52	-939.45	940.41	-321.78	40°06'07.792"N	104°47'16.245"W	10.00	
7317.00†	50.549	180.170	7114.46	-868.16	869.12	-321.99	40°06'07.087"N	104°47'16.247"W	10.00	
7355.66†	54.415	180.170	7138.00	-837.50	838.46	-322.08	40°06'06.784"N	104°47'16.248"W	10.00	SHARON SPRINGS
7417.00†	60.549	180.170	7170.96	-785.80	786.76	-322.23	40°06'06.273"N	104°47'16.250"W	10.00	
7440.30†	62.879	180.170	7182.00	-765.29	766.25	-322.29	40°06'06.070"N	104°47'16.251"W	10.00	NIOBRARA A
7517.00†	70.549	180.170	7212.30	-694.89	695.85	-322.50	40°06'05.374"N	104°47'16.254"W	10.00	
7617.00†	80.549	180.170	7237.22	-598.17	599.13	-322.79	40°06'04.418"N	104°47'16.258"W	10.00	
7711.51	90.000	180.170	7245.00	-504.09	505.05	-323.07	40°06'03.488"N	104°47'16.261"W	10.00	LANDING POINT

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)
Area	Compass Import	Well	CARTER 13N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 13N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	90.000	180.170	7245.00	-498.60	499.56	-323.08	40°06'03.434"N	104°47'16.261"W	0.00	
7817.00†	90.000	180.170	7245.00	-398.60	399.56	-323.38	40°06'02.445"N	104°47'16.265"W	0.00	
7917.00†	90.000	180.170	7245.00	-298.60	299.56	-323.68	40°06'01.456"N	104°47'16.269"W	0.00	
8017.00†	90.000	180.170	7245.00	-198.60	199.56	-323.97	40°06'00.468"N	104°47'16.273"W	0.00	
8117.00†	90.000	180.170	7245.00	-98.60	99.56	-324.27	40°05'59.479"N	104°47'16.277"W	0.00	
8217.00†	90.000	180.170	7245.00	1.40	-0.43	-324.57	40°05'58.491"N	104°47'16.280"W	0.00	
8317.00†	90.000	180.170	7245.00	101.40	-100.43	-324.86	40°05'57.502"N	104°47'16.284"W	0.00	
8417.00†	90.000	180.170	7245.00	201.40	-200.43	-325.16	40°05'56.513"N	104°47'16.288"W	0.00	
8517.00†	90.000	180.170	7245.00	301.40	-300.43	-325.46	40°05'55.525"N	104°47'16.292"W	0.00	
8617.00†	90.000	180.170	7245.00	401.40	-400.43	-325.76	40°05'54.536"N	104°47'16.296"W	0.00	
8717.00†	90.000	180.170	7245.00	501.40	-500.43	-326.05	40°05'53.548"N	104°47'16.299"W	0.00	
8817.00†	90.000	180.170	7245.00	601.40	-600.43	-326.35	40°05'52.559"N	104°47'16.303"W	0.00	
8917.00†	90.000	180.170	7245.00	701.40	-700.43	-326.65	40°05'51.570"N	104°47'16.307"W	0.00	
9017.00†	90.000	180.170	7245.00	801.40	-800.43	-326.94	40°05'50.582"N	104°47'16.311"W	0.00	
9117.00†	90.000	180.170	7245.00	901.40	-900.43	-327.24	40°05'49.593"N	104°47'16.315"W	0.00	
9217.00†	90.000	180.170	7245.00	1001.40	-1000.43	-327.54	40°05'48.605"N	104°47'16.318"W	0.00	
9317.00†	90.000	180.170	7245.00	1101.40	-1100.43	-327.83	40°05'47.616"N	104°47'16.322"W	0.00	
9417.00†	90.000	180.170	7245.00	1201.40	-1200.43	-328.13	40°05'46.627"N	104°47'16.326"W	0.00	
9517.00†	90.000	180.170	7245.00	1301.40	-1300.43	-328.43	40°05'45.639"N	104°47'16.330"W	0.00	
9617.00†	90.000	180.170	7245.00	1401.40	-1400.43	-328.72	40°05'44.650"N	104°47'16.334"W	0.00	
9717.00†	90.000	180.170	7245.00	1501.40	-1500.43	-329.02	40°05'43.662"N	104°47'16.337"W	0.00	
9817.00†	90.000	180.170	7245.00	1601.40	-1600.43	-329.32	40°05'42.673"N	104°47'16.341"W	0.00	
9917.00†	90.000	180.170	7245.00	1701.40	-1700.43	-329.61	40°05'41.684"N	104°47'16.345"W	0.00	
10017.00†	90.000	180.170	7245.00	1801.40	-1800.43	-329.91	40°05'40.696"N	104°47'16.349"W	0.00	
10117.00†	90.000	180.170	7245.00	1901.40	-1900.43	-330.21	40°05'39.707"N	104°47'16.353"W	0.00	
10217.00†	90.000	180.170	7245.00	2001.40	-2000.43	-330.50	40°05'38.719"N	104°47'16.356"W	0.00	
10317.00†	90.000	180.170	7245.00	2101.40	-2100.43	-330.80	40°05'37.730"N	104°47'16.360"W	0.00	
10417.00†	90.000	180.170	7245.00	2201.40	-2200.43	-331.10	40°05'36.741"N	104°47'16.364"W	0.00	
10517.00†	90.000	180.170	7245.00	2301.40	-2300.42	-331.40	40°05'35.753"N	104°47'16.368"W	0.00	
10617.00†	90.000	180.170	7245.00	2401.40	-2400.42	-331.69	40°05'34.764"N	104°47'16.372"W	0.00	
10717.00†	90.000	180.170	7245.00	2501.40	-2500.42	-331.99	40°05'33.776"N	104°47'16.375"W	0.00	
10817.00†	90.000	180.170	7245.00	2601.40	-2600.42	-332.29	40°05'32.787"N	104°47'16.379"W	0.00	
10917.00†	90.000	180.170	7245.00	2701.40	-2700.42	-332.58	40°05'31.798"N	104°47'16.383"W	0.00	
11017.00†	90.000	180.170	7245.00	2801.40	-2800.42	-332.88	40°05'30.810"N	104°47'16.387"W	0.00	
11117.00†	90.000	180.170	7245.00	2901.40	-2900.42	-333.18	40°05'29.821"N	104°47'16.391"W	0.00	
11217.00†	90.000	180.170	7245.00	3001.40	-3000.42	-333.47	40°05'28.833"N	104°47'16.394"W	0.00	
11317.00†	90.000	180.170	7245.00	3101.40	-3100.42	-333.77	40°05'27.844"N	104°47'16.398"W	0.00	
11417.00†	90.000	180.170	7245.00	3201.40	-3200.42	-334.07	40°05'26.855"N	104°47'16.402"W	0.00	
11517.00†	90.000	180.170	7245.00	3301.40	-3300.42	-334.37	40°05'25.867"N	104°47'16.406"W	0.00	
11617.00†	90.000	180.170	7245.00	3401.40	-3400.42	-334.66	40°05'24.878"N	104°47'16.410"W	0.00	
11717.00†	90.000	180.170	7245.00	3501.40	-3500.42	-334.96	40°05'23.890"N	104°47'16.413"W	0.00	
11817.00†	90.000	180.170	7245.00	3601.40	-3600.42	-335.26	40°05'22.901"N	104°47'16.417"W	0.00	
11917.00†	90.000	180.170	7245.00	3701.40	-3700.42	-335.55	40°05'21.912"N	104°47'16.421"W	0.00	
12017.00†	90.000	180.170	7245.00	3801.40	-3800.42	-335.85	40°05'20.924"N	104°47'16.425"W	0.00	
12117.00†	90.000	180.170	7245.00	3901.40	-3900.42	-336.15	40°05'19.935"N	104°47'16.429"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)
Area	Compass Import	Well	CARTER 13N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 13N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12217.00†	90.000	180.170	7245.00	4001.40	-4000.42	-336.44	40°05'18.947"N	104°47'16.432"W	0.00	
12317.00†	90.000	180.170	7245.00	4101.40	-4100.42	-336.74	40°05'17.958"N	104°47'16.436"W	0.00	
12417.00†	90.000	180.170	7245.00	4201.40	-4200.42	-337.04	40°05'16.969"N	104°47'16.440"W	0.00	
12517.00†	90.000	180.170	7245.00	4301.40	-4300.42	-337.34	40°05'15.981"N	104°47'16.444"W	0.00	
12615.84	90.000	180.170	7245.00 ¹	4400.24	-4399.26	-337.63	40°05'15.004"N	104°47'16.448"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: CARTER 13N-33HZ PWB Ref Wellpath: CARTER 13N-33HZ (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	1089.00	1072.00	17.00	1089.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1089.00	1072.00	17.00	1089.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1089.00	7711.51	6622.51	1089.00	7245.00	0.00	0.00	505.05	-323.07
7in Casing Intermediate	17.00	7711.51	7694.51	17.00	7245.00	0.00	0.00	505.05	-323.07
6.125in Open Hole	7711.51	12615.84	4904.33	7245.00	7245.00	505.05	-323.07	-4399.26	-337.63
4.5in Casing Production	17.00	12615.84	12598.84	17.00	7245.00	0.00	0.00	-4399.26	-337.63

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.33-T2N-R66W SECTION LINES		0.00	0.40	-59.81	1700006.28	14563067.38	40°05'58.499"N	104°47'12.872"W	polygon
CARTER 13N-33HZ BHL REV-1 (50'FSL & 1106'FWL, SEC.33)		7245.00	-4399.26	-262.63	1699814.01	14558667.25	40°05'15.004"N	104°47'15.482"W	point
1) CARTER 13N-33HZ BHL REV-2 (50'FSL & 1031'FWL, SEC.33)	12615.84	7245.00	-4399.26	-337.63	1699739.01	14558667.07	40°05'15.004"N	104°47'16.448"W	point

SURVEY PROGRAM - Ref Wellbore: CARTER 13N-33HZ PWB Ref Wellpath: CARTER 13N-33HZ (PERMIT REV-1) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	12615.84	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (MagVAR IFR Wattenberg)		CARTER 13N-33HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#03 CARTER 13N-33HZ (825'FNL & 1380'FWL, SEC.33)
Area	Compass Import	Well	CARTER 13N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 13N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1039.00	0.000	343.400	1039.00	FOX HILLS BASE
4069.12	15.000	343.400	3988.00	PARKMAN
4589.86	15.000	343.400	4491.00	SUSSEX
6711.51	0.000	180.170	6572.04	4 1/2" LINER TOP
7355.66	54.415	180.170	7138.00	SHARON SPRINGS
7440.30	62.879	180.170	7182.00	NIOBRARA A

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	343.400	17.00	TIE ON
1189.00	0.000	343.400	1189.00	BEGIN NUDGE
1939.00	15.000	343.400	1930.46	END NUDGE
5530.93	15.000	343.400	5400.00	BEGIN DROP
6280.93	0.000	180.170	6141.46	END DROP
6811.51	0.000	180.170	6672.04	KOP, BUILD @ 10°/100'
7711.51	90.000	180.170	7245.00	LANDING POINT
12615.84	90.000	180.170	7245.00	TOTAL DEPTH