

KERR-MCGEE OIL & GAS ONSHORE LP

Location: Compass Import Slot: SLOT#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)
Field: WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH) Well: CARTER 14N-33HZ
Facility: SEC.33-T2N-R66W Wellbore: CARTER 14N-33HZ PWB

Plot reference wellpath is CARTER 14N-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#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robiale01 on 12/15/2014

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)	Latitude	Longitude
SLOT#06 CARTER 14N-33HZ (825FNL & 1470FWL, SEC.33)	502.96	-2593.48	1700156.122	14563067.332	40°05'58.495"N	104°47'10.943"W
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#06 CARTER 14N-33HZ (825FNL & 1470FWL, SEC.33))					4976ft	
Mean Sea Level to Mud line (At Slot: SLOT#06 CARTER 14N-33HZ (825FNL & 1470FWL, SEC.33))					0ft	
PERMIT (17KB) (RKB) to Mean Sea Level					4976ft	

Survey Program

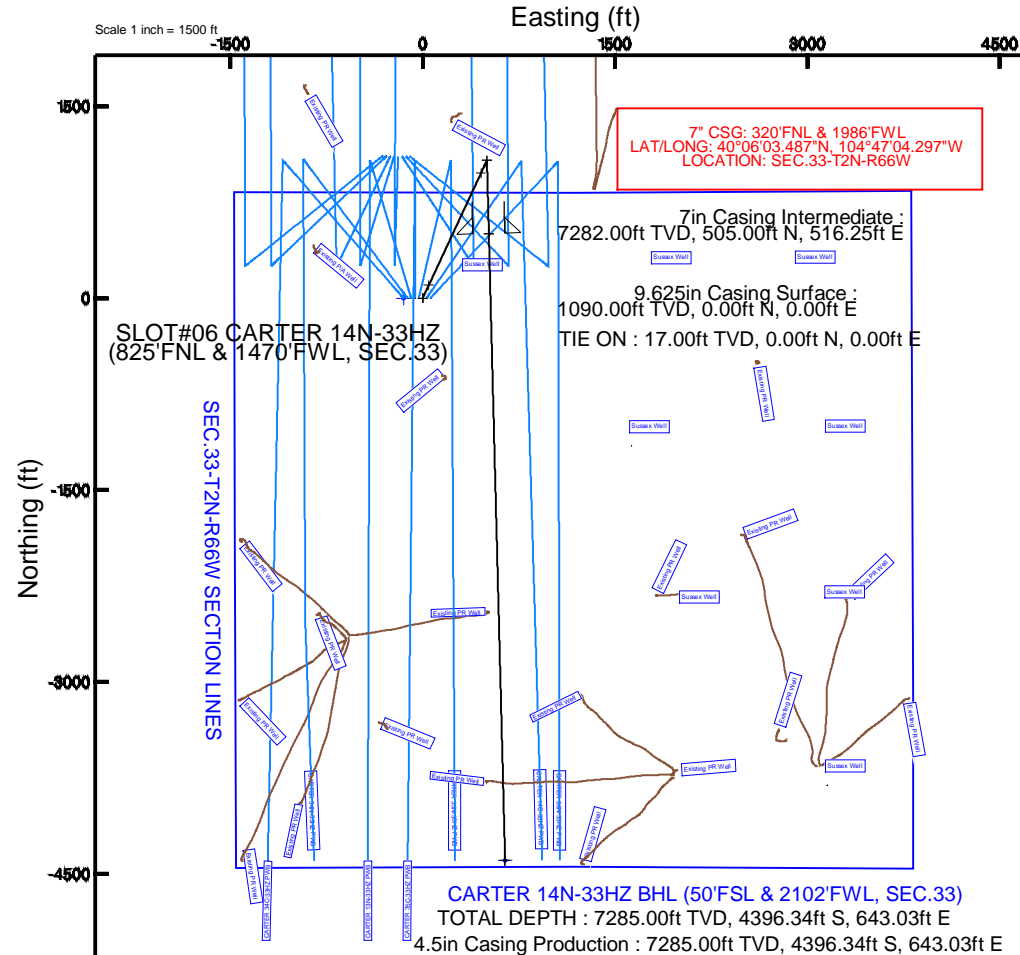
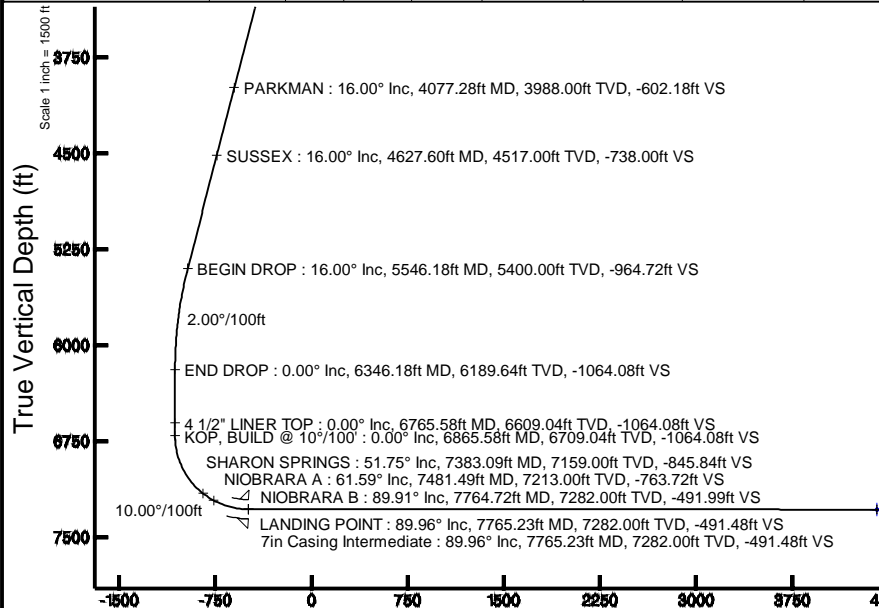
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	12668.21	ISOWSA MWD, Rev. 2, axial magnetic correction	ISOWSA MWD, Rev. 2, axial magnetic correction (Standard) (Mag/AR IFR Wattenberg)		CARTER 14N-33HZ PWB

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	0.41	-149.84	1700006.28	14563067.38	40°05'58.499"N	104°47'12.872"W
CARTER 14N-33HZ BHL (50'FSL & 2102'FWL, SEC.33)	12668.21	7285.00	-4396.34	643.03	1700809.71	14558672.56	40°05'15.032"N	104°47'02.666"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	24.958	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1240.00	0.000	24.958	1240.00	0.00	0.00	0.00	0.00
END NUDGE	2040.00	16.000	24.958	2029.64	100.61	46.83	2.00	-99.37
BEGIN DROP	5546.18	16.000	24.958	5400.00	976.80	454.62	0.00	-964.72
END DROP	6346.18	0.000	178.518	6189.64	1077.41	501.45	2.00	-1064.08
KOP, BUILD @ 10°/100'	6865.58	0.000	178.518	6709.04	1077.41	501.45	0.00	-1064.08
LANDING POINT	7765.23	89.965	178.518	7282.00	505.00	516.25	10.00	-491.48
TOTAL DEPTH	12668.21	89.965	178.518	7285.00	-4396.34	643.03	0.00	4411.50



TOTAL DEPTH : 89.96° Inc, 12668.21ft MD, 7285.00ft TVD, 4411.50ft VS
4.5in Casing Production : 89.96° Inc, 12668.21ft MD, 7285.00ft TVD, 4411.50ft VS

Vertical Section (ft)
Azimuth 178.52° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500 ft

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)
Area	Compass Import	Well	CARTER 14N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 14N-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	1/15/2015 at 2:04:07 PM
Convergence at slot	n/a	Database/Source file	WellArchitectDB/CARTER_14N-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	502.96	-2593.48	1700156.12	14563067.33	40°05'58.495"N	104°47'10.943"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#06 CARTER 14N-33HZ (825'FNL & 1470'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	178.52°

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Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)
Area	Compass Import	Well	CARTER 14N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 14N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (142 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	24.958	0.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
17.00	0.000	24.958	17.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	TIE ON
117.00†	0.000	24.958	117.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
217.00†	0.000	24.958	217.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
317.00†	0.000	24.958	317.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
417.00†	0.000	24.958	417.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
517.00†	0.000	24.958	517.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
617.00†	0.000	24.958	617.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
717.00†	0.000	24.958	717.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
817.00†	0.000	24.958	817.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
917.00†	0.000	24.958	917.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
1017.00†	0.000	24.958	1017.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
1040.00†	0.000	24.958	1040.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	FOX HILLS BASE
1117.00†	0.000	24.958	1117.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
1217.00†	0.000	24.958	1217.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	
1240.00	0.000	24.958	1240.00	0.00	0.00	0.00	40°05'58.495"N	104°47'10.943"W	0.00	BEGIN NUDGE
1317.00†	1.540	24.958	1316.99	-0.93	0.94	0.44	40°05'58.504"N	104°47'10.937"W	2.00	
1417.00†	3.540	24.958	1416.89	-4.89	4.96	2.31	40°05'58.544"N	104°47'10.913"W	2.00	
1517.00†	5.540	24.958	1516.57	-11.98	12.13	5.65	40°05'58.615"N	104°47'10.870"W	2.00	
1617.00†	7.540	24.958	1615.91	-22.18	22.46	10.45	40°05'58.717"N	104°47'10.808"W	2.00	
1717.00†	9.540	24.958	1714.80	-35.48	35.92	16.72	40°05'58.850"N	104°47'10.728"W	2.00	
1817.00†	11.540	24.958	1813.11	-51.85	52.50	24.44	40°05'59.014"N	104°47'10.628"W	2.00	
1917.00†	13.540	24.958	1910.72	-71.29	72.19	33.60	40°05'59.209"N	104°47'10.510"W	2.00	
2017.00†	15.540	24.958	2007.51	-93.77	94.95	44.19	40°05'59.434"N	104°47'10.374"W	2.00	
2040.00	16.000	24.958	2029.64	-99.37	100.61	46.83	40°05'59.490"N	104°47'10.340"W	2.00	END NUDGE
2117.00†	16.000	24.958	2103.66	-118.37	119.86	55.78	40°05'59.680"N	104°47'10.225"W	0.00	
2217.00†	16.000	24.958	2199.79	-143.05	144.85	67.41	40°05'59.927"N	104°47'10.075"W	0.00	
2317.00†	16.000	24.958	2295.91	-167.73	169.84	79.04	40°06'00.174"N	104°47'09.925"W	0.00	
2417.00†	16.000	24.958	2392.04	-192.41	194.83	90.67	40°06'00.421"N	104°47'09.776"W	0.00	
2517.00†	16.000	24.958	2488.16	-217.10	219.81	102.31	40°06'00.668"N	104°47'09.626"W	0.00	
2617.00†	16.000	24.958	2584.29	-241.78	244.80	113.94	40°06'00.915"N	104°47'09.476"W	0.00	
2717.00†	16.000	24.958	2680.42	-266.46	269.79	125.57	40°06'01.162"N	104°47'09.327"W	0.00	
2817.00†	16.000	24.958	2776.54	-291.14	294.78	137.20	40°06'01.409"N	104°47'09.177"W	0.00	
2917.00†	16.000	24.958	2872.67	-315.82	319.77	148.83	40°06'01.656"N	104°47'09.027"W	0.00	
3017.00†	16.000	24.958	2968.80	-340.50	344.76	160.46	40°06'01.903"N	104°47'08.877"W	0.00	
3117.00†	16.000	24.958	3064.92	-365.18	369.75	172.09	40°06'02.150"N	104°47'08.728"W	0.00	
3217.00†	16.000	24.958	3161.05	-389.86	394.74	183.72	40°06'02.397"N	104°47'08.578"W	0.00	
3317.00†	16.000	24.958	3257.17	-414.54	419.73	195.35	40°06'02.644"N	104°47'08.428"W	0.00	
3417.00†	16.000	24.958	3353.30	-439.22	444.72	206.98	40°06'02.892"N	104°47'08.278"W	0.00	
3517.00†	16.000	24.958	3449.43	-463.90	469.71	218.61	40°06'03.139"N	104°47'08.129"W	0.00	
3617.00†	16.000	24.958	3545.55	-488.58	494.70	230.24	40°06'03.386"N	104°47'07.979"W	0.00	
3717.00†	16.000	24.958	3641.68	-513.26	519.69	241.87	40°06'03.633"N	104°47'07.829"W	0.00	
3817.00†	16.000	24.958	3737.80	-537.94	544.68	253.50	40°06'03.880"N	104°47'07.679"W	0.00	
3917.00†	16.000	24.958	3833.93	-562.62	569.67	265.13	40°06'04.127"N	104°47'07.530"W	0.00	
4017.00†	16.000	24.958	3930.06	-587.30	594.66	276.76	40°06'04.374"N	104°47'07.380"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)
Area	Compass Import	Well	CARTER 14N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 14N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4077.28†	16.000	24.958	3988.00	-602.18	609.72	283.78	40°06'04.523"N	104°47'07.290"W	0.00	PARKMAN
4117.00†	16.000	24.958	4026.18	-611.99	619.65	288.40	40°06'04.621"N	104°47'07.230"W	0.00	
4217.00†	16.000	24.958	4122.31	-636.67	644.64	300.03	40°06'04.868"N	104°47'07.081"W	0.00	
4317.00†	16.000	24.958	4218.44	-661.35	669.63	311.66	40°06'05.115"N	104°47'06.931"W	0.00	
4417.00†	16.000	24.958	4314.56	-686.03	694.62	323.29	40°06'05.362"N	104°47'06.781"W	0.00	
4517.00†	16.000	24.958	4410.69	-710.71	719.61	334.92	40°06'05.609"N	104°47'06.631"W	0.00	
4617.00†	16.000	24.958	4506.81	-735.39	744.60	346.55	40°06'05.856"N	104°47'06.482"W	0.00	
4627.60†	16.000	24.958	4517.00	-738.00	747.25	347.78	40°06'05.882"N	104°47'06.466"W	0.00	SUSSEX
4717.00†	16.000	24.958	4602.94	-760.07	769.59	358.18	40°06'06.103"N	104°47'06.332"W	0.00	
4817.00†	16.000	24.958	4699.07	-784.75	794.58	369.81	40°06'06.350"N	104°47'06.182"W	0.00	
4917.00†	16.000	24.958	4795.19	-809.43	819.57	381.44	40°06'06.597"N	104°47'06.032"W	0.00	
5017.00†	16.000	24.958	4891.32	-834.11	844.56	393.07	40°06'06.844"N	104°47'05.883"W	0.00	
5117.00†	16.000	24.958	4987.45	-858.79	869.55	404.70	40°06'07.091"N	104°47'05.733"W	0.00	
5217.00†	16.000	24.958	5083.57	-883.47	894.54	416.33	40°06'07.338"N	104°47'05.583"W	0.00	
5317.00†	16.000	24.958	5179.70	-908.15	919.53	427.96	40°06'07.585"N	104°47'05.433"W	0.00	
5417.00†	16.000	24.958	5275.82	-932.83	944.52	439.59	40°06'07.833"N	104°47'05.284"W	0.00	
5517.00†	16.000	24.958	5371.95	-957.51	969.51	451.22	40°06'08.080"N	104°47'05.134"W	0.00	
5546.18	16.000	24.958	5400.00	-964.72	976.80	454.62	40°06'08.152"N	104°47'05.090"W	0.00	BEGIN DROP
5617.00†	14.584	24.958	5468.31	-981.44	993.73	462.50	40°06'08.319"N	104°47'04.989"W	2.00	
5717.00†	12.584	24.958	5565.51	-1002.47	1015.02	472.41	40°06'08.530"N	104°47'04.861"W	2.00	
5817.00†	10.584	24.958	5663.47	-1020.45	1033.23	480.88	40°06'08.710"N	104°47'04.752"W	2.00	
5917.00†	8.584	24.958	5762.07	-1035.35	1048.32	487.91	40°06'08.859"N	104°47'04.662"W	2.00	
6017.00†	6.584	24.958	5861.19	-1047.17	1060.29	493.47	40°06'08.977"N	104°47'04.590"W	2.00	
6117.00†	4.584	24.958	5960.71	-1055.88	1069.11	497.58	40°06'09.064"N	104°47'04.537"W	2.00	
6217.00†	2.584	24.958	6060.51	-1061.48	1074.77	500.22	40°06'09.120"N	104°47'04.503"W	2.00	
6317.00†	0.584	24.958	6160.46	-1063.95	1077.28	501.38	40°06'09.145"N	104°47'04.488"W	2.00	
6346.18	0.000	178.518	6189.64	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	2.00	END DROP
6417.00†	0.000	178.518	6260.46	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	0.00	
6517.00†	0.000	178.518	6360.46	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	0.00	
6617.00†	0.000	178.518	6460.46	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	0.00	
6717.00†	0.000	178.518	6560.46	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	0.00	
6765.58†	0.000	178.518	6609.04	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	0.00	4 1/2" LINER TOP
6817.00†	0.000	178.518	6660.46	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	0.00	
6865.58	0.000	178.518	6709.04	-1064.08	1077.41	501.45	40°06'09.146"N	104°47'04.487"W	0.00	KOP, BUILD @ 10°/100'
6917.00†	5.142	178.518	6760.39	-1061.78	1075.11	501.50	40°06'09.124"N	104°47'04.487"W	10.00	
7017.00†	15.142	178.518	6858.71	-1044.19	1057.53	501.96	40°06'08.950"N	104°47'04.481"W	10.00	
7117.00†	25.142	178.518	6952.47	-1009.80	1023.15	502.85	40°06'08.610"N	104°47'04.469"W	10.00	
7217.00†	35.142	178.518	7038.84	-959.65	973.01	504.15	40°06'08.114"N	104°47'04.453"W	10.00	
7317.00†	45.142	178.518	7115.19	-895.26	908.65	505.81	40°06'07.478"N	104°47'04.431"W	10.00	
7383.09†	51.751	178.518	7159.00	-845.84	859.24	507.09	40°06'06.989"N	104°47'04.415"W	10.00	SHARON SPRINGS
7417.00†	55.142	178.518	7179.20	-818.60	832.01	507.79	40°06'06.720"N	104°47'04.406"W	10.00	
7481.49†	61.591	178.518	7213.00	-763.72	777.15	509.21	40°06'06.178"N	104°47'04.387"W	10.00	NIOBRARA A
7517.00†	65.142	178.518	7228.92	-731.98	745.42	510.03	40°06'05.864"N	104°47'04.377"W	10.00	
7617.00†	75.142	178.518	7262.84	-638.05	651.52	512.46	40°06'04.936"N	104°47'04.346"W	10.00	
7717.00†	85.142	178.518	7279.94	-539.65	553.15	515.01	40°06'03.963"N	104°47'04.313"W	10.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)
Area	Compass Import	Well	CARTER 14N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 14N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7764.72†	89.914	178.518	7282.00	-491.99	505.51	516.24	40°06'03.492"N	104°47'04.297"W	10.00	NIOBRARA B
7765.23	89.965	178.518	7282.00	-491.48	505.00	516.25	40°06'03.487"N	104°47'04.297"W	10.00	LANDING POINT
7817.00†	89.965	178.518	7282.03	-439.71	453.25	517.59	40°06'02.976"N	104°47'04.280"W	0.00	
7917.00†	89.965	178.518	7282.09	-339.71	353.28	520.18	40°06'01.987"N	104°47'04.246"W	0.00	
8017.00†	89.965	178.518	7282.15	-239.71	253.31	522.77	40°06'00.999"N	104°47'04.213"W	0.00	
8117.00†	89.965	178.518	7282.22	-139.71	153.35	525.35	40°06'00.011"N	104°47'04.180"W	0.00	
8217.00†	89.965	178.518	7282.28	-39.71	53.38	527.94	40°05'59.023"N	104°47'04.147"W	0.00	
8317.00†	89.965	178.518	7282.34	60.29	-46.59	530.53	40°05'58.034"N	104°47'04.113"W	0.00	
8417.00†	89.965	178.518	7282.40	160.29	-146.55	533.11	40°05'57.046"N	104°47'04.080"W	0.00	
8517.00†	89.965	178.518	7282.46	260.29	-246.52	535.70	40°05'56.058"N	104°47'04.047"W	0.00	
8617.00†	89.965	178.518	7282.52	360.29	-346.49	538.28	40°05'55.070"N	104°47'04.014"W	0.00	
8717.00†	89.965	178.518	7282.58	460.29	-446.45	540.87	40°05'54.081"N	104°47'03.980"W	0.00	
8817.00†	89.965	178.518	7282.64	560.29	-546.42	543.46	40°05'53.093"N	104°47'03.947"W	0.00	
8917.00†	89.965	178.518	7282.71	660.29	-646.39	546.04	40°05'52.105"N	104°47'03.914"W	0.00	
9017.00†	89.965	178.518	7282.77	760.29	-746.35	548.63	40°05'51.116"N	104°47'03.880"W	0.00	
9117.00†	89.965	178.518	7282.83	860.29	-846.32	551.22	40°05'50.128"N	104°47'03.847"W	0.00	
9217.00†	89.965	178.518	7282.89	960.29	-946.29	553.80	40°05'49.140"N	104°47'03.814"W	0.00	
9317.00†	89.965	178.518	7282.95	1060.29	-1046.25	556.39	40°05'48.152"N	104°47'03.781"W	0.00	
9417.00†	89.965	178.518	7283.01	1160.29	-1146.22	558.98	40°05'47.163"N	104°47'03.747"W	0.00	
9517.00†	89.965	178.518	7283.07	1260.29	-1246.19	561.56	40°05'46.175"N	104°47'03.714"W	0.00	
9617.00†	89.965	178.518	7283.13	1360.29	-1346.15	564.15	40°05'45.187"N	104°47'03.681"W	0.00	
9717.00†	89.965	178.518	7283.19	1460.29	-1446.12	566.73	40°05'44.199"N	104°47'03.648"W	0.00	
9817.00†	89.965	178.518	7283.26	1560.29	-1546.09	569.32	40°05'43.210"N	104°47'03.614"W	0.00	
9917.00†	89.965	178.518	7283.32	1660.29	-1646.05	571.91	40°05'42.222"N	104°47'03.581"W	0.00	
10017.00†	89.965	178.518	7283.38	1760.29	-1746.02	574.49	40°05'41.234"N	104°47'03.548"W	0.00	
10117.00†	89.965	178.518	7283.44	1860.29	-1845.98	577.08	40°05'40.245"N	104°47'03.515"W	0.00	
10217.00†	89.965	178.518	7283.50	1960.29	-1945.95	579.67	40°05'39.257"N	104°47'03.481"W	0.00	
10317.00†	89.965	178.518	7283.56	2060.29	-2045.92	582.25	40°05'38.269"N	104°47'03.448"W	0.00	
10417.00†	89.965	178.518	7283.62	2160.29	-2145.88	584.84	40°05'37.281"N	104°47'03.415"W	0.00	
10517.00†	89.965	178.518	7283.68	2260.29	-2245.85	587.43	40°05'36.292"N	104°47'03.381"W	0.00	
10617.00†	89.965	178.518	7283.75	2360.29	-2345.82	590.01	40°05'35.304"N	104°47'03.348"W	0.00	
10717.00†	89.965	178.518	7283.81	2460.29	-2445.78	592.60	40°05'34.316"N	104°47'03.315"W	0.00	
10817.00†	89.965	178.518	7283.87	2560.29	-2545.75	595.18	40°05'33.327"N	104°47'03.282"W	0.00	
10917.00†	89.965	178.518	7283.93	2660.29	-2645.72	597.77	40°05'32.339"N	104°47'03.248"W	0.00	
11017.00†	89.965	178.518	7283.99	2760.29	-2745.68	600.36	40°05'31.351"N	104°47'03.215"W	0.00	
11117.00†	89.965	178.518	7284.05	2860.29	-2845.65	602.94	40°05'30.363"N	104°47'03.182"W	0.00	
11217.00†	89.965	178.518	7284.11	2960.29	-2945.62	605.53	40°05'29.374"N	104°47'03.149"W	0.00	
11317.00†	89.965	178.518	7284.17	3060.29	-3045.58	608.12	40°05'28.386"N	104°47'03.115"W	0.00	
11417.00†	89.965	178.518	7284.23	3160.29	-3145.55	610.70	40°05'27.398"N	104°47'03.082"W	0.00	
11517.00†	89.965	178.518	7284.30	3260.29	-3245.52	613.29	40°05'26.410"N	104°47'03.049"W	0.00	
11617.00†	89.965	178.518	7284.36	3360.29	-3345.48	615.87	40°05'25.421"N	104°47'03.016"W	0.00	
11717.00†	89.965	178.518	7284.42	3460.29	-3445.45	618.46	40°05'24.433"N	104°47'02.982"W	0.00	
11817.00†	89.965	178.518	7284.48	3560.29	-3545.42	621.05	40°05'23.445"N	104°47'02.949"W	0.00	
11917.00†	89.965	178.518	7284.54	3660.29	-3645.38	623.63	40°05'22.456"N	104°47'02.916"W	0.00	
12017.00†	89.965	178.518	7284.60	3760.29	-3745.35	626.22	40°05'21.468"N	104°47'02.883"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)
Area	Compass Import	Well	CARTER 14N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 14N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH DATA (142 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	89.965	178.518	7284.66	3860.29	-3845.32	628.81	40°05'20.480"N	104°47'02.849"W	0.00	
12217.00†	89.965	178.518	7284.72	3960.29	-3945.28	631.39	40°05'19.492"N	104°47'02.816"W	0.00	
12317.00†	89.965	178.518	7284.79	4060.29	-4045.25	633.98	40°05'18.503"N	104°47'02.783"W	0.00	
12417.00†	89.965	178.518	7284.85	4160.29	-4145.22	636.57	40°05'17.515"N	104°47'02.750"W	0.00	
12517.00†	89.965	178.518	7284.91	4260.29	-4245.18	639.15	40°05'16.527"N	104°47'02.716"W	0.00	
12617.00†	89.965	178.518	7284.97	4360.29	-4345.15	641.74	40°05'15.538"N	104°47'02.683"W	0.00	
12668.25	89.965	178.518	7285.00 ¹	4411.54	-4396.38	643.06	40°05'15.032"N	104°47'02.666"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS - Ref Wellbore: CARTER 14N-33HZ PWB Ref Wellpath: CARTER 14N-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	1090.00	1073.00	17.00	1090.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1090.00	1073.00	17.00	1090.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1090.00	7765.23	6675.23	1090.00	7282.00	0.00	0.00	505.00	516.25
7in Casing Intermediate	17.00	7765.23	7748.23	17.00	7282.00	0.00	0.00	505.00	516.25
6.125in Open Hole	7765.23	12668.25	4903.02	7282.00	7285.00	505.00	516.25	-4396.38	643.06
4.5in Casing Production	17.00	12668.25	12651.25	17.00	7285.00	0.00	0.00	-4396.38	643.06

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	0.41	-149.84	1700006.28	14563067.38	40°05'58.499"N	104°47'12.872"W	polygon
1) CARTER 14N-33HZ BHL (50'FSL & 2102'FWL, SEC.33)	12668.25	7285.00	-4396.38	643.06	1700809.74	14558672.52	40°05'15.032"N	104°47'02.666"W	point

SURVEY PROGRAM - Ref Wellbore: CARTER 14N-33HZ PWB Ref Wellpath: CARTER 14N-33HZ (PERMIT REV-1) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	12668.21	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (MagVAR IFR Wattenberg)		CARTER 14N-33HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#06 CARTER 14N-33HZ (825'FNL & 1470'FWL, SEC.33)
Area	Compass Import	Well	CARTER 14N-33HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	CARTER 14N-33HZ PWB
Facility	SEC.33-T2N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1040.00	0.000	24.958	1040.00	FOX HILLS BASE
4077.28	16.000	24.958	3988.00	PARKMAN
4627.60	16.000	24.958	4517.00	SUSSEX
6765.58	0.000	178.518	6609.04	4 1/2" LINER TOP
7383.09	51.751	178.518	7159.00	SHARON SPRINGS
7481.49	61.591	178.518	7213.00	NIOBRARA A
7764.72	89.914	178.518	7282.00	NIOBRARA B

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	24.958	17.00	TIE ON
1240.00	0.000	24.958	1240.00	BEGIN NUDGE
2040.00	16.000	24.958	2029.64	END NUDGE
5546.18	16.000	24.958	5400.00	BEGIN DROP
6346.18	0.000	178.518	6189.64	END DROP
6865.58	0.000	178.518	6709.04	KOP, BUILD @ 10°/100'
7765.23	89.965	178.518	7282.00	LANDING POINT
12668.25	89.965	178.518	7285.00	TOTAL DEPTH