

# KERR-MCGEE OIL & GAS ONSHORE LP\_1



Location: Compass Import Slot: SLOT#01 POWERS 34G-22HZ  
Field: WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH) Well: POWERS 34G-22HZ  
Facility: 2N-65W-22 Offsets Wellbore: POWERS 34G-22HZ PWB

Plot reference wellpath is POWERS 34G-22HZ (PERMIT REV-2) 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: 4900 feet Scale: Grid distance  
Mean Sea Level to Mud line (At Slot: SLOT#01 POWERS 34G-22HZ): 0 feet Depths are in feet  
Coordinates are in feet referenced to Slot Created by: precain on 2/9/2015

## Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
2N-65W-22 Offsets			1738275.355	14569566.651	40°07'01.553"N	104°38'59.892"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#01 POWERS 34G-22HZ	4455.44	-1131.77	1737126.058	14574017.587	40°07'45.599"N	104°39'14.468"W
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#01 POWERS 34G-22HZ)					4900ft	
Mean Sea Level to Mud line (At Slot: SLOT#01 POWERS 34G-22HZ)					0ft	
PERMIT (17KB) (RKB) to Mean Sea Level					4900ft	

## Survey Program

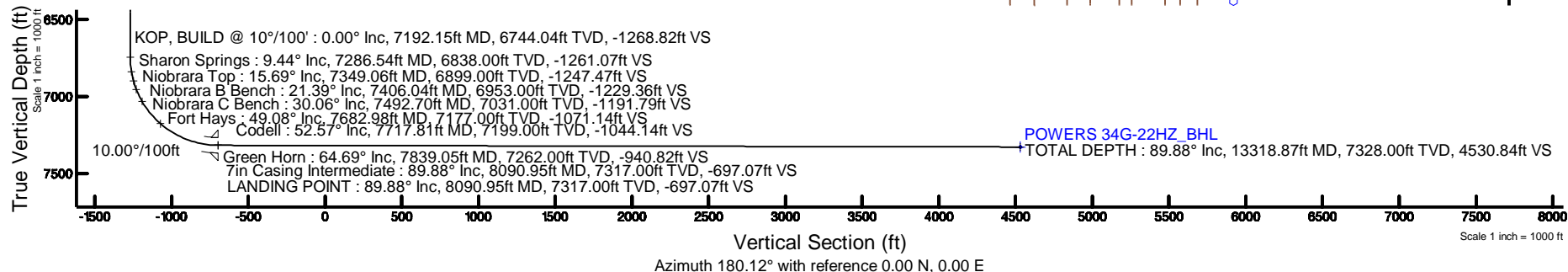
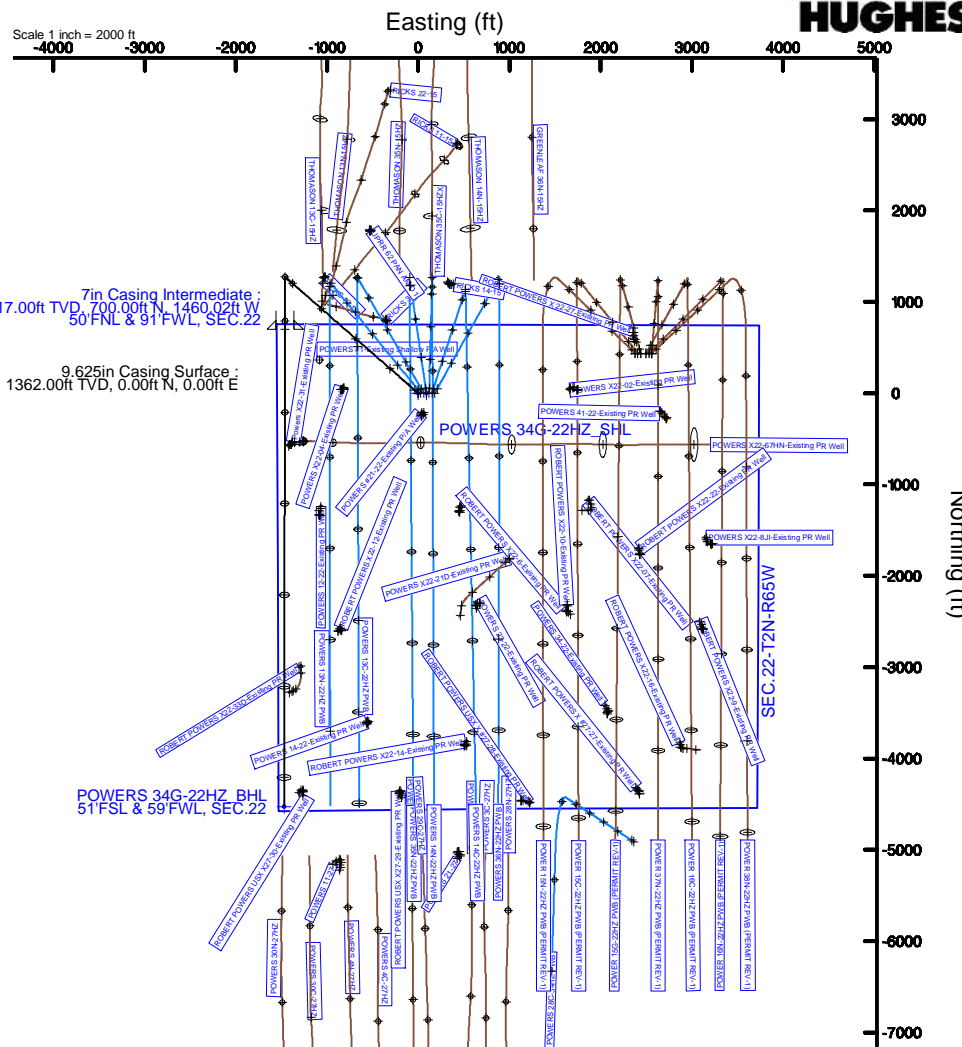
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	13318.87	ISOWSA MWD, Rev. 2, axial magnetic correction	ISOWSA MWD, Rev. 2, axial magnetic correction (Standard) (Mag/VAR IFR Wattenberg)		POWERS 34G-22HZ PWB

## 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	311.080	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1450.00	0.000	311.080	1450.00	0.00	0.00	0.00	0.00
END NUDGE	2950.00	30.000	311.080	2882.39	252.21	-289.31	2.00	-251.62
BEGIN DROP	5285.50	30.000	311.080	4905.00	1019.55	-1169.56	0.00	-1017.20
END DROP	6785.50	0.000	180.115	6337.39	1271.75	-1458.87	2.00	-1268.82
KOP, BUILD @ 10°/100'	7192.15	0.000	180.115	6744.04	1271.75	-1458.87	0.00	-1268.82
LANDING POINT	8090.95	89.879	180.115	7317.00	700.00	-1460.02	10.00	-697.07
TOTAL DEPTH	13318.87	89.879	180.115	7328.00	-4527.90	-1470.55	0.00	4530.84

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
POWERS 34G-22HZ_SHL	4900.00	0.00	0.00	0.00	1737126.06	14574017.59	40°07'45.599"N	104°39'14.468"W
SEC.22-T2N-R65W	4900.00	0.00	89.99	0.00	1737216.05	14574017.94	40°07'45.599"N	104°39'13.309"W
POWERS 34G-22HZ_BHL	13318.87	7328.00	-4527.90	-1470.55	1735673.14	14569484.01	40°07'00.836"N	104°39'33.404"W



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#01 POWERS 34G-22HZ
Area	Compass Import	Well	POWERS 34G-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 34G-22HZ PWB
Facility	2N-65W-22 Offsets		

## REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Precain
Scale	0.999611	Report Generated	2/9/2015 at 11:38:44 AM
Convergence at slot	0.22° East	Database/Source file	WellArchitectDC/POWERS_34G-22HZ_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	4455.44	-1131.77	1737126.06	14574017.59	40°07'45.599"N	104°39'14.468"W
Facility Reference Pt			1738275.36	14569566.65	40°07'01.553"N	104°38'59.892"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-65W-22 Offsets vertical datum	4900.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	4900.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#01 POWERS 34G-22HZ)	4900.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.12°

# Planned Wellpath Report

POWERS 34G-22HZ (PERMIT REV-2) PWP

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Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 34G-22HZ PWB
Facility	2N-65W-22 Offsets		

## WELLPATH DATA (151 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	311.080	0.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
17.00	0.000	311.080	17.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	TIE-ON
117.00†	0.000	311.080	117.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
217.00†	0.000	311.080	217.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
317.00†	0.000	311.080	317.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
417.00†	0.000	311.080	417.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
517.00†	0.000	311.080	517.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
617.00†	0.000	311.080	617.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
717.00†	0.000	311.080	717.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
817.00†	0.000	311.080	817.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
917.00†	0.000	311.080	917.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
1017.00†	0.000	311.080	1017.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
1117.00†	0.000	311.080	1117.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
1217.00†	0.000	311.080	1217.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
1312.00†	0.000	311.080	1312.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	Fox Hills Parkman
1317.00†	0.000	311.080	1317.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
1417.00†	0.000	311.080	1417.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	
1450.00	0.000	311.080	1450.00	0.00	0.00	0.00	40°07'45.599"N	104°39'14.468"W	0.00	BEGIN NUDGE
1517.00†	1.340	311.080	1516.99	-0.51	0.51	-0.59	40°07'45.604"N	104°39'14.476"W	2.00	
1617.00†	3.340	311.080	1616.91	-3.19	3.20	-3.67	40°07'45.631"N	104°39'14.515"W	2.00	
1717.00†	5.340	311.080	1716.61	-8.15	8.17	-9.37	40°07'45.680"N	104°39'14.589"W	2.00	
1817.00†	7.340	311.080	1816.00	-15.39	15.43	-17.70	40°07'45.752"N	104°39'14.696"W	2.00	
1917.00†	9.340	311.080	1914.93	-24.90	24.96	-28.63	40°07'45.846"N	104°39'14.837"W	2.00	
2017.00†	11.340	311.080	2013.31	-36.67	36.75	-42.16	40°07'45.962"N	104°39'15.011"W	2.00	
2117.00†	13.340	311.080	2110.99	-50.68	50.79	-58.27	40°07'46.101"N	104°39'15.218"W	2.00	
2217.00†	15.340	311.080	2207.87	-66.91	67.07	-76.94	40°07'46.262"N	104°39'15.459"W	2.00	
2317.00†	17.340	311.080	2303.83	-85.36	85.55	-98.14	40°07'46.445"N	104°39'15.732"W	2.00	
2417.00†	19.340	311.080	2398.74	-105.98	106.23	-121.86	40°07'46.649"N	104°39'16.037"W	2.00	
2517.00†	21.340	311.080	2492.50	-128.77	129.07	-148.06	40°07'46.875"N	104°39'16.375"W	2.00	
2617.00†	23.340	311.080	2584.99	-153.69	154.04	-176.71	40°07'47.122"N	104°39'16.744"W	2.00	
2717.00†	25.340	311.080	2676.10	-180.71	181.13	-207.77	40°07'47.390"N	104°39'17.144"W	2.00	
2817.00†	27.340	311.080	2765.71	-209.80	210.28	-241.22	40°07'47.678"N	104°39'17.575"W	2.00	
2917.00†	29.340	311.080	2853.72	-240.92	241.47	-277.00	40°07'47.986"N	104°39'18.035"W	2.00	
2950.00	30.000	311.080	2882.39	-251.62	252.21	-289.31	40°07'48.092"N	104°39'18.194"W	2.00	END NUDGE
3017.00†	30.000	311.080	2940.42	-273.59	274.22	-314.56	40°07'48.310"N	104°39'18.519"W	0.00	
3117.00†	30.000	311.080	3027.02	-306.37	307.07	-352.25	40°07'48.635"N	104°39'19.005"W	0.00	
3217.00†	30.000	311.080	3113.62	-339.15	339.93	-389.94	40°07'48.960"N	104°39'19.490"W	0.00	
3317.00†	30.000	311.080	3200.23	-371.93	372.79	-427.63	40°07'49.284"N	104°39'19.976"W	0.00	
3417.00†	30.000	311.080	3286.83	-404.71	405.64	-465.32	40°07'49.609"N	104°39'20.461"W	0.00	
3517.00†	30.000	311.080	3373.43	-437.49	438.50	-503.01	40°07'49.934"N	104°39'20.946"W	0.00	
3617.00†	30.000	311.080	3460.03	-470.27	471.35	-540.70	40°07'50.259"N	104°39'21.432"W	0.00	
3717.00†	30.000	311.080	3546.64	-503.05	504.21	-578.39	40°07'50.584"N	104°39'21.917"W	0.00	
3817.00†	30.000	311.080	3633.24	-535.83	537.06	-616.08	40°07'50.908"N	104°39'22.403"W	0.00	
3917.00†	30.000	311.080	3719.84	-568.61	569.92	-653.77	40°07'51.233"N	104°39'22.888"W	0.00	
4017.00†	30.000	311.080	3806.44	-601.39	602.77	-691.46	40°07'51.558"N	104°39'23.374"W	0.00	

## REFERENCE WELLPATH IDENTIFICATION

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Area	Compass Import	Well	POWERS 34G-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 34G-22HZ PWB
Facility	2N-65W-22 Offsets		

## WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	30.000	311.080	3893.05	-634.17	635.63	-729.15	40°07'51.883"N	104°39'23.859"W	0.00	
4217.00†	30.000	311.080	3979.65	-666.95	668.49	-766.84	40°07'52.208"N	104°39'24.344"W	0.00	
4317.00†	30.000	311.080	4066.25	-699.73	701.34	-804.53	40°07'52.532"N	104°39'24.830"W	0.00	
4417.00†	30.000	311.080	4152.85	-732.51	734.20	-842.22	40°07'52.857"N	104°39'25.315"W	0.00	
4517.00†	30.000	311.080	4239.46	-765.29	767.05	-879.91	40°07'53.182"N	104°39'25.801"W	0.00	
4617.00†	30.000	311.080	4326.06	-798.07	799.91	-917.60	40°07'53.507"N	104°39'26.286"W	0.00	
4661.97†	30.000	311.080	4365.00	-812.80	814.68	-934.55	40°07'53.653"N	104°39'26.504"W	0.00	Sussex
4717.00†	30.000	311.080	4412.66	-830.85	832.76	-955.29	40°07'53.831"N	104°39'26.772"W	0.00	
4817.00†	30.000	311.080	4499.26	-863.62	865.62	-992.98	40°07'54.156"N	104°39'27.257"W	0.00	
4917.00†	30.000	311.080	4585.87	-896.40	898.48	-1030.67	40°07'54.481"N	104°39'27.742"W	0.00	
5017.00†	30.000	311.080	4672.47	-929.18	931.33	-1068.36	40°07'54.806"N	104°39'28.228"W	0.00	
5117.00†	30.000	311.080	4759.07	-961.96	964.19	-1106.05	40°07'55.131"N	104°39'28.713"W	0.00	
5217.00†	30.000	311.080	4845.67	-994.74	997.04	-1143.74	40°07'55.455"N	104°39'29.199"W	0.00	
5285.50	30.000	311.080	4905.00	-1017.20	1019.55	-1169.56	40°07'55.678"N	104°39'29.531"W	0.00	BEGIN DROP
5317.00†	29.370	311.080	4932.36	-1027.43	1029.80	-1181.31	40°07'55.779"N	104°39'29.683"W	2.00	
5417.00†	27.370	311.080	5020.35	-1058.58	1061.02	-1217.13	40°07'56.088"N	104°39'30.144"W	2.00	
5517.00†	25.370	311.080	5109.94	-1087.69	1090.21	-1250.61	40°07'56.376"N	104°39'30.575"W	2.00	
5617.00†	23.370	311.080	5201.02	-1114.74	1117.32	-1281.71	40°07'56.644"N	104°39'30.976"W	2.00	
5717.00†	21.370	311.080	5293.49	-1139.69	1142.33	-1310.40	40°07'56.892"N	104°39'31.345"W	2.00	
5817.00†	19.370	311.080	5387.23	-1162.51	1165.20	-1336.63	40°07'57.118"N	104°39'31.683"W	2.00	
5917.00†	17.370	311.080	5482.13	-1183.17	1185.91	-1360.39	40°07'57.322"N	104°39'31.989"W	2.00	
6017.00†	15.370	311.080	5578.07	-1201.65	1204.43	-1381.63	40°07'57.506"N	104°39'32.263"W	2.00	
6117.00†	13.370	311.080	5674.94	-1217.92	1220.73	-1400.34	40°07'57.667"N	104°39'32.504"W	2.00	
6217.00†	11.370	311.080	5772.61	-1231.96	1234.81	-1416.49	40°07'57.806"N	104°39'32.712"W	2.00	
6317.00†	9.370	311.080	5870.98	-1243.76	1246.64	-1430.05	40°07'57.923"N	104°39'32.887"W	2.00	
6417.00†	7.370	311.080	5969.91	-1253.31	1256.20	-1441.03	40°07'58.017"N	104°39'33.028"W	2.00	
6517.00†	5.370	311.080	6069.28	-1260.58	1263.49	-1449.39	40°07'58.089"N	104°39'33.136"W	2.00	
6617.00†	3.370	311.080	6168.99	-1265.58	1268.50	-1455.13	40°07'58.139"N	104°39'33.210"W	2.00	
6717.00†	1.370	311.080	6268.90	-1268.29	1271.22	-1458.25	40°07'58.166"N	104°39'33.250"W	2.00	
6785.50	0.000	180.115	6337.39	-1268.82	1271.75	-1458.87	40°07'58.171"N	104°39'33.258"W	2.00	END DROP
6817.00†	0.000	180.115	6368.89	-1268.82	1271.75	-1458.87	40°07'58.171"N	104°39'33.258"W	0.00	
6917.00†	0.000	180.115	6468.89	-1268.82	1271.75	-1458.87	40°07'58.171"N	104°39'33.258"W	0.00	
7017.00†	0.000	180.115	6568.89	-1268.82	1271.75	-1458.87	40°07'58.171"N	104°39'33.258"W	0.00	
7117.00†	0.000	180.115	6668.89	-1268.82	1271.75	-1458.87	40°07'58.171"N	104°39'33.258"W	0.00	
7192.15	0.000	180.115	6744.04	-1268.82	1271.75	-1458.87	40°07'58.171"N	104°39'33.258"W	0.00	KOP, BUILD @ 10°/100'
7217.00†	2.485	180.115	6768.88	-1268.29	1271.22	-1458.87	40°07'58.166"N	104°39'33.258"W	10.00	
7286.54†	9.438	180.115	6838.00	-1261.07	1264.00	-1458.88	40°07'58.094"N	104°39'33.258"W	10.00	Sharon Springs
7317.00†	12.485	180.115	6867.91	-1255.28	1258.21	-1458.90	40°07'58.037"N	104°39'33.258"W	10.00	
7349.06†	15.691	180.115	6899.00	-1247.47	1250.40	-1458.91	40°07'57.960"N	104°39'33.258"W	10.00	Niobrara Top
7406.04†	21.389	180.115	6953.00	-1229.36	1232.29	-1458.95	40°07'57.781"N	104°39'33.259"W	10.00	Niobrara B Bench
7417.00†	22.485	180.115	6963.16	-1225.27	1228.20	-1458.96	40°07'57.741"N	104°39'33.259"W	10.00	
7492.70†	30.055	180.115	7031.00	-1191.79	1194.72	-1459.02	40°07'57.409"N	104°39'33.260"W	10.00	Niobrara C Bench
7517.00†	32.485	180.115	7051.76	-1179.18	1182.11	-1459.05	40°07'57.285"N	104°39'33.260"W	10.00	
7617.00†	42.485	180.115	7131.02	-1118.40	1121.33	-1459.17	40°07'56.684"N	104°39'33.261"W	10.00	
7682.98†	49.082	180.115	7177.00	-1071.14	1074.07	-1459.27	40°07'56.217"N	104°39'33.263"W	10.00	Fort Hays

# Planned Wellpath Report

POWERS 34G-22HZ (PERMIT REV-2) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#01 POWERS 34G-22HZ
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Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 34G-22HZ PWB
Facility	2N-65W-22 Offsets		

## WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7717.00†	52.485	180.115	7198.51	-1044.78	1047.71	-1459.32	40°07'55.956"N	104°39'33.263"W	10.00	
7717.81†	52.565	180.115	7199.00	-1044.14	1047.07	-1459.32	40°07'55.950"N	104°39'33.263"W	10.00	Codell
7817.00†	62.485	180.115	7252.19	-960.57	963.50	-1459.49	40°07'55.124"N	104°39'33.265"W	10.00	
7839.05†	64.689	180.115	7262.00	-940.82	943.75	-1459.53	40°07'54.928"N	104°39'33.266"W	10.00	Green Horn
7917.00†	72.485	180.115	7290.44	-868.30	871.24	-1459.67	40°07'54.212"N	104°39'33.268"W	10.00	
8017.00†	82.485	180.115	7312.08	-770.80	773.74	-1459.87	40°07'53.248"N	104°39'33.270"W	10.00	
8090.95	89.879	180.115	7317.00	-697.07	700.00	-1460.02	40°07'52.519"N	104°39'33.272"W	10.00	LANDING POINT
8117.00†	89.879	180.115	7317.06	-671.02	673.95	-1460.07	40°07'52.261"N	104°39'33.273"W	0.00	
8217.00†	89.879	180.115	7317.27	-571.02	573.95	-1460.27	40°07'51.273"N	104°39'33.275"W	0.00	
8317.00†	89.879	180.115	7317.48	-471.02	473.95	-1460.47	40°07'50.284"N	104°39'33.278"W	0.00	
8417.00†	89.879	180.115	7317.69	-371.02	373.95	-1460.68	40°07'49.295"N	104°39'33.280"W	0.00	
8517.00†	89.879	180.115	7317.90	-271.02	273.95	-1460.88	40°07'48.307"N	104°39'33.283"W	0.00	
8617.00†	89.879	180.115	7318.11	-171.02	173.95	-1461.08	40°07'47.318"N	104°39'33.285"W	0.00	
8717.00†	89.879	180.115	7318.32	-71.02	73.95	-1461.28	40°07'46.330"N	104°39'33.288"W	0.00	
8817.00†	89.879	180.115	7318.53	28.98	-26.04	-1461.48	40°07'45.341"N	104°39'33.290"W	0.00	
8917.00†	89.879	180.115	7318.74	128.98	-126.04	-1461.68	40°07'44.353"N	104°39'33.293"W	0.00	
9017.00†	89.879	180.115	7318.95	228.98	-226.04	-1461.88	40°07'43.364"N	104°39'33.295"W	0.00	
9117.00†	89.879	180.115	7319.16	328.98	-326.04	-1462.09	40°07'42.375"N	104°39'33.298"W	0.00	
9217.00†	89.879	180.115	7319.37	428.98	-426.04	-1462.29	40°07'41.387"N	104°39'33.300"W	0.00	
9317.00†	89.879	180.115	7319.58	528.98	-526.04	-1462.49	40°07'40.398"N	104°39'33.303"W	0.00	
9417.00†	89.879	180.115	7319.79	628.98	-626.04	-1462.69	40°07'39.410"N	104°39'33.305"W	0.00	
9517.00†	89.879	180.115	7320.00	728.98	-726.04	-1462.89	40°07'38.421"N	104°39'33.308"W	0.00	
9617.00†	89.879	180.115	7320.21	828.98	-826.04	-1463.09	40°07'37.432"N	104°39'33.311"W	0.00	
9717.00†	89.879	180.115	7320.42	928.98	-926.04	-1463.29	40°07'36.444"N	104°39'33.313"W	0.00	
9817.00†	89.879	180.115	7320.63	1028.98	-1026.04	-1463.50	40°07'35.455"N	104°39'33.316"W	0.00	
9917.00†	89.879	180.115	7320.84	1128.98	-1126.04	-1463.70	40°07'34.467"N	104°39'33.318"W	0.00	
10017.00†	89.879	180.115	7321.05	1228.98	-1226.04	-1463.90	40°07'33.478"N	104°39'33.321"W	0.00	
10117.00†	89.879	180.115	7321.26	1328.98	-1326.04	-1464.10	40°07'32.489"N	104°39'33.323"W	0.00	
10217.00†	89.879	180.115	7321.47	1428.98	-1426.04	-1464.30	40°07'31.501"N	104°39'33.326"W	0.00	
10317.00†	89.879	180.115	7321.68	1528.97	-1526.04	-1464.50	40°07'30.512"N	104°39'33.328"W	0.00	
10417.00†	89.879	180.115	7321.89	1628.97	-1626.04	-1464.70	40°07'29.524"N	104°39'33.331"W	0.00	
10517.00†	89.879	180.115	7322.11	1728.97	-1726.04	-1464.91	40°07'28.535"N	104°39'33.333"W	0.00	
10617.00†	89.879	180.115	7322.32	1828.97	-1826.04	-1465.11	40°07'27.546"N	104°39'33.336"W	0.00	
10717.00†	89.879	180.115	7322.53	1928.97	-1926.04	-1465.31	40°07'26.558"N	104°39'33.338"W	0.00	
10817.00†	89.879	180.115	7322.74	2028.97	-2026.04	-1465.51	40°07'25.569"N	104°39'33.341"W	0.00	
10917.00†	89.879	180.115	7322.95	2128.97	-2126.04	-1465.71	40°07'24.581"N	104°39'33.343"W	0.00	
11017.00†	89.879	180.115	7323.16	2228.97	-2226.04	-1465.91	40°07'23.592"N	104°39'33.346"W	0.00	
11117.00†	89.879	180.115	7323.37	2328.97	-2326.04	-1466.11	40°07'22.603"N	104°39'33.348"W	0.00	
11217.00†	89.879	180.115	7323.58	2428.97	-2426.03	-1466.32	40°07'21.615"N	104°39'33.351"W	0.00	
11317.00†	89.879	180.115	7323.79	2528.97	-2526.03	-1466.52	40°07'20.626"N	104°39'33.353"W	0.00	
11417.00†	89.879	180.115	7324.00	2628.97	-2626.03	-1466.72	40°07'19.638"N	104°39'33.356"W	0.00	
11517.00†	89.879	180.115	7324.21	2728.97	-2726.03	-1466.92	40°07'18.649"N	104°39'33.358"W	0.00	
11617.00†	89.879	180.115	7324.42	2828.97	-2826.03	-1467.12	40°07'17.661"N	104°39'33.361"W	0.00	
11717.00†	89.879	180.115	7324.63	2928.97	-2926.03	-1467.32	40°07'16.672"N	104°39'33.363"W	0.00	
11817.00†	89.879	180.115	7324.84	3028.97	-3026.03	-1467.52	40°07'15.683"N	104°39'33.366"W	0.00	



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#01 POWERS 34G-22HZ
Area	Compass Import	Well	POWERS 34G-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 34G-22HZ PWB
Facility	2N-65W-22 Offsets		

## WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11917.00†	89.879	180.115	7325.05	3128.97	-3126.03	-1467.73	40°07'14.695"N	104°39'33.368"W	0.00	
12017.00†	89.879	180.115	7325.26	3228.97	-3226.03	-1467.93	40°07'13.706"N	104°39'33.371"W	0.00	
12117.00†	89.879	180.115	7325.47	3328.97	-3326.03	-1468.13	40°07'12.718"N	104°39'33.373"W	0.00	
12217.00†	89.879	180.115	7325.68	3428.97	-3426.03	-1468.33	40°07'11.729"N	104°39'33.376"W	0.00	
12317.00†	89.879	180.115	7325.89	3528.97	-3526.03	-1468.53	40°07'10.740"N	104°39'33.378"W	0.00	
12417.00†	89.879	180.115	7326.10	3628.97	-3626.03	-1468.73	40°07'09.752"N	104°39'33.381"W	0.00	
12517.00†	89.879	180.115	7326.31	3728.97	-3726.03	-1468.93	40°07'08.763"N	104°39'33.384"W	0.00	
12617.00†	89.879	180.115	7326.52	3828.97	-3826.03	-1469.14	40°07'07.775"N	104°39'33.386"W	0.00	
12717.00†	89.879	180.115	7326.73	3928.97	-3926.03	-1469.34	40°07'06.786"N	104°39'33.389"W	0.00	
12817.00†	89.879	180.115	7326.94	4028.97	-4026.03	-1469.54	40°07'05.797"N	104°39'33.391"W	0.00	
12917.00†	89.879	180.115	7327.15	4128.97	-4126.03	-1469.74	40°07'04.809"N	104°39'33.394"W	0.00	
13017.00†	89.879	180.115	7327.36	4228.97	-4226.03	-1469.94	40°07'03.820"N	104°39'33.396"W	0.00	
13117.00†	89.879	180.115	7327.58	4328.97	-4326.03	-1470.14	40°07'02.832"N	104°39'33.399"W	0.00	
13217.00†	89.879	180.115	7327.79	4428.97	-4426.03	-1470.34	40°07'01.843"N	104°39'33.401"W	0.00	
13317.00†	89.879	180.115	7328.00	4528.97	-4526.03	-1470.55	40°07'00.854"N	104°39'33.404"W	0.00	
13318.87	89.879	180.115	7328.00†	4530.84	-4527.90	-1470.55	40°07'00.836"N	104°39'33.404"W	0.00	TOTAL DEPTH

## HOLE & CASING SECTIONS - Ref Wellbore: POWERS 34G-22HZ PWB Ref Wellpath: POWERS 34G-22HZ (PERMIT REV-2) 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	1362.00	1345.00	17.00	1362.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1362.00	1345.00	17.00	1362.00	0.00	0.00	0.00	0.00
8.75in Open Hole	1362.00	8090.95	6728.95	1362.00	7317.00	0.00	0.00	700.00	-1460.02
7in Casing Intermediate	17.00	8090.95	8073.95	17.00	7317.00	0.00	0.00	700.00	-1460.02
6.125in Open Hole	8090.95	13318.87	5227.92	7317.00	7328.00	700.00	-1460.02	-4527.90	-1470.55
4.5in Casing Production	17.00	13318.87	13301.87	17.00	7328.00	0.00	0.00	-4527.90	-1470.55

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
POWERS 34G-22HZ_SHL		4900.00	0.00	0.00	1737126.06	14574017.59	40°07'45.599"N	104°39'14.468"W	point
SEC.22-T2N-R65W		4900.00	0.00	89.99	1737216.05	14574017.94	40°07'45.599"N	104°39'13.309"W	polygon
1) POWERS 34G-22HZ_BHL	13318.87	7328.00	-4527.90	-1470.55	1735673.14	14569484.01	40°07'00.836"N	104°39'33.404"W	point

## SURVEY PROGRAM - Ref Wellbore: POWERS 34G-22HZ PWB Ref Wellpath: POWERS 34G-22HZ (PERMIT REV-2) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	13318.87	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (MagVAR IFR Wattenberg)		POWERS 34G-22HZ PWB

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#01 POWERS 34G-22HZ
Area	Compass Import	Well	POWERS 34G-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 34G-22HZ PWB
Facility	2N-65W-22 Offsets		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1312.00	0.000	311.080	1312.00	Fox Hills Parkman
4661.97	30.000	311.080	4365.00	Sussex
7286.54	9.438	180.115	6838.00	Sharon Springs
7349.06	15.691	180.115	6899.00	Niobrara Top
7406.04	21.389	180.115	6953.00	Niobrara B Bench
7492.70	30.055	180.115	7031.00	Niobrara C Bench
7682.98	49.082	180.115	7177.00	Fort Hays
7717.81	52.565	180.115	7199.00	Codell
7839.05	64.689	180.115	7262.00	Green Horn

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	311.080	17.00	TIE-ON
1450.00	0.000	311.080	1450.00	BEGIN NUDGE
2950.00	30.000	311.080	2882.39	END NUDGE
5285.50	30.000	311.080	4905.00	BEGIN DROP
6785.50	0.000	180.115	6337.39	END DROP
7192.15	0.000	180.115	6744.04	KOP, BUILD @ 10°/100'
8090.95	89.879	180.115	7317.00	LANDING POINT
13318.87	89.879	180.115	7328.00	TOTAL DEPTH