

KERR-MCGEE OIL & GAS ONSHORE LP_1



Location: Compass Import Slot: SLOT#07 POWERS 36N-22HZ
Field: WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH) Well: POWERS 36N-22HZ
Facility: 2N-65W-22 Offsets Wellbore: POWERS 36N-22HZ PWB

Plot reference wellpath is POWERS 36N-22HZ (PERMIT REV-3) PWB

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#07 POWERS 36N-22HZ): 0 feet Depths are in feet
Coordinates are in feet referenced to Slot Created by: precin 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#07 POWERS 36N-22HZ	4455.02	-951.79	1737306.041	14574017.884	40°07'45.595"N	104°39'12.150"W
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#07 POWERS 36N-22HZ)					4900ft	
Mean Sea Level to Mud line (At Slot: SLOT#07 POWERS 36N-22HZ)					0ft	
PERMIT (17KB) (RKB) to Mean Sea Level					4900ft	

Survey Program

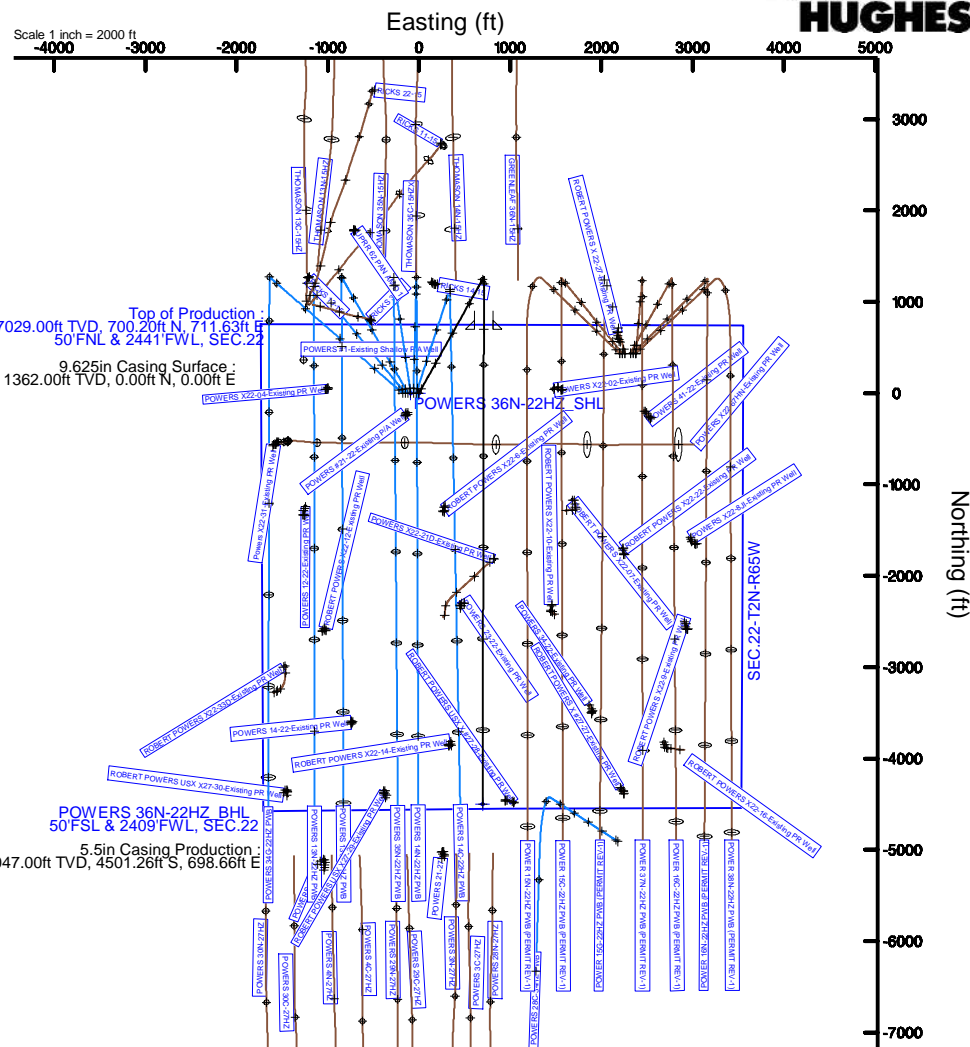
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	12811.45	ISOWSA MWD, Rev. 2, axial magnetic correction	ISOWSA MWD, Rev. 2, axial magnetic correction (Standard) (Mag/VAR IFR Wattenberg)		POWERS 36N-22HZ PWB

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	29.290	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1450.00	0.000	29.290	1450.00	0.00	0.00	0.00	0.00
END NUDGE	2550.00	22.000	29.290	2523.17	181.93	102.05	2.00	-182.19
BEGIN DROP	5327.04	22.000	29.290	5098.00	1089.24	611.00	0.00	-1090.76
END DROP	6427.04	0.000	180.143	6171.17	1271.17	713.06	2.00	-1272.95
KOP, BUILD @ 10°/100'	6711.92	0.000	180.143	6456.05	1271.17	713.06	0.00	-1272.95
LANDING POINT	7609.94	89.802	180.143	7029.00	700.20	711.63	10.00	-701.97
TOTAL DEPTH	12811.45	89.802	180.143	7047.00	-4501.26	698.66	0.00	4499.51

Targets

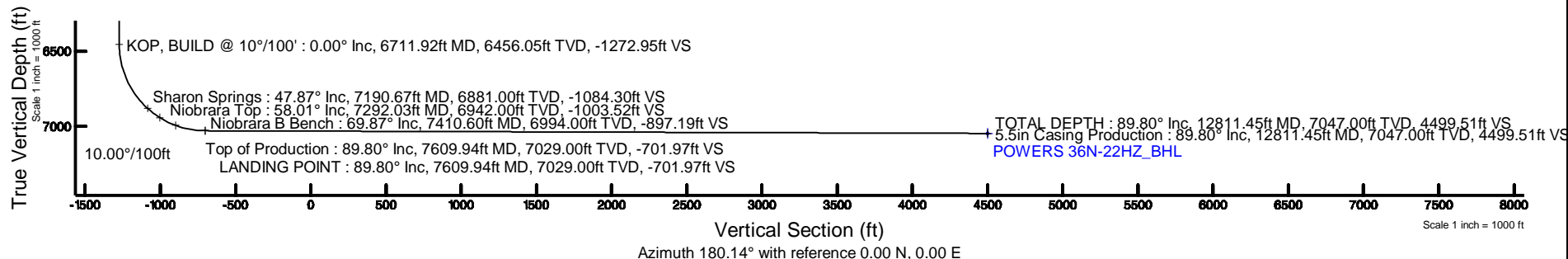
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
POWERS 36N-22HZ_SHL		4900.00	0.00	0.00	1737306.04	14574017.88	40°07'45.595"N	104°39'12.150"W
SEC.22-T2N-R65W		4900.00	0.40	-89.99	1737216.05	14574017.94	40°07'45.599"N	104°39'13.309"W
POWERS 36N-22HZ_BHL	12811.45	7047.00	-4501.26	698.66	1738022.25	14569519.39	40°07'01.096"N	104°39'03.154"W



Top of Production :
7029.00ft TVD, 700.20ft N, 711.63ft E
50°FNL & 2441°FWL, SEC.22
9.625in Casing Surface :
1362.00ft TVD, 0.00ft N, 0.00ft E

POWERS 36N-22HZ_BHL
50°FNL & 2409°FWL, SEC.22

5.5in Casing Production :
7047.00ft TVD, 4501.26ft S, 698.66ft E



TOTAL DEPTH : 89.80° Inc, 12811.45ft MD, 7047.00ft TVD, 4499.51ft VS
+ 5.5in Casing Production : 89.80° Inc, 12811.45ft MD, 7047.00ft TVD, 4499.51ft VS
POWERS 36N-22HZ_BHL

Azimuth 180.14° with reference 0.00 N, 0.00 E

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#07 POWERS 36N-22HZ
Area	Compass Import	Well	POWERS 36N-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 36N-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	4/28/2015 at 2:00:59 PM
Convergence at slot	0.22° East	Database/Source file	WellArchitectDC/POWERS_36N-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	4455.02	-951.79	1737306.04	14574017.88	40°07'45.595"N	104°39'12.150"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#07 POWERS 36N-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	180.14°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#07 POWERS 36N-22HZ
Area	Compass Import	Well	POWERS 36N-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 36N-22HZ PWB
Facility	2N-65W-22 Offsets		

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	29.290	0.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
17.00	0.000	29.290	17.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	TIE-ON
117.00†	0.000	29.290	117.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
217.00†	0.000	29.290	217.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
317.00†	0.000	29.290	317.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
417.00†	0.000	29.290	417.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
517.00†	0.000	29.290	517.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
617.00†	0.000	29.290	617.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
717.00†	0.000	29.290	717.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
817.00†	0.000	29.290	817.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
917.00†	0.000	29.290	917.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
1017.00†	0.000	29.290	1017.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
1117.00†	0.000	29.290	1117.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
1217.00†	0.000	29.290	1217.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
1312.00†	0.000	29.290	1312.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	Fox Hills Marker
1317.00†	0.000	29.290	1317.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
1417.00†	0.000	29.290	1417.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	
1450.00	0.000	29.290	1450.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.150"W	0.00	BEGIN NUDGE
1517.00†	1.340	29.290	1516.99	-0.68	0.68	0.38	40°07'45.602"N	104°39'12.145"W	2.00	
1617.00†	3.340	29.290	1616.91	-4.25	4.24	2.38	40°07'45.637"N	104°39'12.119"W	2.00	
1717.00†	5.340	29.290	1716.61	-10.86	10.84	6.08	40°07'45.702"N	104°39'12.072"W	2.00	
1817.00†	7.340	29.290	1816.00	-20.50	20.47	11.48	40°07'45.797"N	104°39'12.002"W	2.00	
1917.00†	9.340	29.290	1914.93	-33.17	33.12	18.58	40°07'45.922"N	104°39'11.911"W	2.00	
2017.00†	11.340	29.290	2013.31	-48.85	48.78	27.36	40°07'46.077"N	104°39'11.798"W	2.00	
2117.00†	13.340	29.290	2110.99	-67.51	67.42	37.82	40°07'46.261"N	104°39'11.663"W	2.00	
2217.00†	15.340	29.290	2207.87	-89.14	89.02	49.93	40°07'46.475"N	104°39'11.507"W	2.00	
2317.00†	17.340	29.290	2303.83	-113.71	113.55	63.70	40°07'46.718"N	104°39'11.330"W	2.00	
2417.00†	19.340	29.290	2398.74	-141.19	140.99	79.09	40°07'46.989"N	104°39'11.131"W	2.00	
2517.00†	21.340	29.290	2492.50	-171.55	171.31	96.09	40°07'47.289"N	104°39'10.912"W	2.00	
2550.00	22.000	29.290	2523.17	-182.19	181.93	102.05	40°07'47.394"N	104°39'10.836"W	2.00	END NUDGE
2617.00†	22.000	29.290	2585.29	-204.11	203.82	114.33	40°07'47.610"N	104°39'10.677"W	0.00	
2717.00†	22.000	29.290	2678.01	-236.83	236.50	132.66	40°07'47.933"N	104°39'10.441"W	0.00	
2817.00†	22.000	29.290	2770.73	-269.54	269.17	150.99	40°07'48.256"N	104°39'10.205"W	0.00	
2917.00†	22.000	29.290	2863.45	-302.26	301.84	169.31	40°07'48.579"N	104°39'09.969"W	0.00	
3017.00†	22.000	29.290	2956.16	-334.98	334.51	187.64	40°07'48.902"N	104°39'09.733"W	0.00	
3117.00†	22.000	29.290	3048.88	-367.69	367.18	205.97	40°07'49.225"N	104°39'09.497"W	0.00	
3217.00†	22.000	29.290	3141.60	-400.41	399.85	224.30	40°07'49.548"N	104°39'09.261"W	0.00	
3317.00†	22.000	29.290	3234.32	-433.13	432.52	242.62	40°07'49.871"N	104°39'09.025"W	0.00	
3417.00†	22.000	29.290	3327.04	-465.85	465.20	260.95	40°07'50.194"N	104°39'08.789"W	0.00	
3517.00†	22.000	29.290	3419.76	-498.56	497.87	279.28	40°07'50.517"N	104°39'08.553"W	0.00	
3617.00†	22.000	29.290	3512.47	-531.28	530.54	297.60	40°07'50.840"N	104°39'08.317"W	0.00	
3717.00†	22.000	29.290	3605.19	-564.00	563.21	315.93	40°07'51.163"N	104°39'08.081"W	0.00	
3817.00†	22.000	29.290	3697.91	-596.71	595.88	334.26	40°07'51.486"N	104°39'07.845"W	0.00	
3917.00†	22.000	29.290	3790.63	-629.43	628.55	352.58	40°07'51.809"N	104°39'07.609"W	0.00	
4017.00†	22.000	29.290	3883.35	-662.15	661.22	370.91	40°07'52.132"N	104°39'07.373"W	0.00	

Planned Wellpath Report

POWERS 36N-22HZ (PERMIT REV-3) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#07 POWERS 36N-22HZ
Area	Compass Import	Well	POWERS 36N-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 36N-22HZ PWB
Facility	2N-65W-22 Offsets		

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
4117.00†	22.000	29.290	3976.07	-694.87	693.90	389.24	40°07'52.455"N	104°39'07.137"W	0.00	
4217.00†	22.000	29.290	4068.78	-727.58	726.57	407.56	40°07'52.778"N	104°39'06.901"W	0.00	
4317.00†	22.000	29.290	4161.50	-760.30	759.24	425.89	40°07'53.101"N	104°39'06.665"W	0.00	
4417.00†	22.000	29.290	4254.22	-793.02	791.91	444.22	40°07'53.424"N	104°39'06.429"W	0.00	
4517.00†	22.000	29.290	4346.94	-825.73	824.58	462.54	40°07'53.747"N	104°39'06.193"W	0.00	
4536.48†	22.000	29.290	4365.00	-832.11	830.95	466.11	40°07'53.810"N	104°39'06.147"W	0.00	Sussex
4617.00†	22.000	29.290	4439.66	-858.45	857.25	480.87	40°07'54.070"N	104°39'05.957"W	0.00	
4717.00†	22.000	29.290	4532.38	-891.17	889.93	499.20	40°07'54.393"N	104°39'05.721"W	0.00	
4817.00†	22.000	29.290	4625.09	-923.89	922.60	517.53	40°07'54.716"N	104°39'05.485"W	0.00	
4917.00†	22.000	29.290	4717.81	-956.60	955.27	535.85	40°07'55.039"N	104°39'05.249"W	0.00	
5017.00†	22.000	29.290	4810.53	-989.32	987.94	554.18	40°07'55.362"N	104°39'05.012"W	0.00	
5117.00†	22.000	29.290	4903.25	-1022.04	1020.61	572.51	40°07'55.685"N	104°39'04.776"W	0.00	
5217.00†	22.000	29.290	4995.97	-1054.75	1053.28	590.83	40°07'56.008"N	104°39'04.540"W	0.00	
5317.00†	22.000	29.290	5088.69	-1087.47	1085.95	609.16	40°07'56.331"N	104°39'04.304"W	0.00	
5327.04	22.000	29.290	5098.00	-1090.76	1089.24	611.00	40°07'56.363"N	104°39'04.281"W	0.00	BEGIN DROP
5417.00†	20.201	29.290	5181.92	-1119.04	1117.48	626.84	40°07'56.642"N	104°39'04.077"W	2.00	
5517.00†	18.201	29.290	5276.35	-1147.76	1146.16	642.93	40°07'56.926"N	104°39'03.869"W	2.00	
5617.00†	16.201	29.290	5371.88	-1173.59	1171.95	657.40	40°07'57.181"N	104°39'03.683"W	2.00	
5717.00†	14.201	29.290	5468.37	-1196.49	1194.82	670.23	40°07'57.407"N	104°39'03.518"W	2.00	
5817.00†	12.201	29.290	5565.72	-1216.43	1214.73	681.40	40°07'57.604"N	104°39'03.374"W	2.00	
5917.00†	10.201	29.290	5663.81	-1233.40	1231.68	690.90	40°07'57.771"N	104°39'03.251"W	2.00	
6017.00†	8.201	29.290	5762.52	-1247.36	1245.62	698.72	40°07'57.909"N	104°39'03.151"W	2.00	
6117.00†	6.201	29.290	5861.73	-1258.31	1256.55	704.86	40°07'58.017"N	104°39'03.072"W	2.00	
6217.00†	4.201	29.290	5961.31	-1266.22	1264.46	709.29	40°07'58.095"N	104°39'03.015"W	2.00	
6317.00†	2.201	29.290	6061.15	-1271.10	1269.33	712.02	40°07'58.143"N	104°39'02.979"W	2.00	
6417.00†	0.201	29.290	6161.12	-1272.93	1271.15	713.05	40°07'58.161"N	104°39'02.966"W	2.00	
6427.04	0.000	180.143	6171.17	-1272.95	1271.17	713.06	40°07'58.162"N	104°39'02.966"W	2.00	END DROP
6517.00†	0.000	180.143	6261.12	-1272.95	1271.17	713.06	40°07'58.162"N	104°39'02.966"W	0.00	
6617.00†	0.000	180.143	6361.12	-1272.95	1271.17	713.06	40°07'58.162"N	104°39'02.966"W	0.00	
6711.92	0.000	180.143	6456.05	-1272.95	1271.17	713.06	40°07'58.162"N	104°39'02.966"W	0.00	KOP, BUILD @ 10°/100'
6717.00†	0.508	180.143	6461.12	-1272.92	1271.15	713.06	40°07'58.161"N	104°39'02.966"W	10.00	
6817.00†	10.508	180.143	6560.54	-1263.34	1261.56	713.03	40°07'58.067"N	104°39'02.966"W	10.00	
6917.00†	20.508	180.143	6656.77	-1236.64	1234.86	712.97	40°07'57.803"N	104°39'02.967"W	10.00	
7017.00†	30.508	180.143	6746.91	-1193.63	1191.85	712.86	40°07'57.377"N	104°39'02.969"W	10.00	
7117.00†	40.508	180.143	6828.21	-1135.62	1133.84	712.71	40°07'56.804"N	104°39'02.971"W	10.00	
7190.67†	47.875	180.143	6881.00	-1084.30	1082.53	712.59	40°07'56.297"N	104°39'02.972"W	10.00	Sharon Springs
7217.00†	50.508	180.143	6898.20	-1064.38	1062.60	712.54	40°07'56.100"N	104°39'02.973"W	10.00	
7292.03†	58.010	180.143	6942.00	-1003.52	1001.75	712.38	40°07'55.498"N	104°39'02.975"W	10.00	Niobrara Top
7317.00†	60.508	180.143	6954.76	-982.06	980.29	712.33	40°07'55.286"N	104°39'02.976"W	10.00	
7410.60†	69.868	180.143	6994.00	-897.19	895.42	712.12	40°07'54.447"N	104°39'02.978"W	10.00	Niobrara B Bench
7417.00†	70.508	180.143	6996.17	-891.17	889.40	712.10	40°07'54.387"N	104°39'02.979"W	10.00	
7517.00†	80.508	180.143	7021.16	-794.48	792.70	711.86	40°07'53.432"N	104°39'02.982"W	10.00	
7609.94†	89.802	180.143	7029.00	-701.97	700.20	711.63	40°07'52.517"N	104°39'02.985"W	10.00	Top of Production
7609.94	89.802	180.143	7029.00	-701.97	700.20	711.63	40°07'52.517"N	104°39'02.985"W	10.00	LANDING POINT
7617.00†	89.802	180.143	7029.03	-694.91	693.14	711.61	40°07'52.447"N	104°39'02.985"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
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Area	Compass Import	Well	POWERS 36N-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 36N-22HZ PWB
Facility	2N-65W-22 Offsets		

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
7717.00†	89.802	180.143	7029.37	-594.91	593.14	711.36	40°07'51.459"N	104°39'02.988"W	0.00	
7817.00†	89.802	180.143	7029.72	-494.91	493.14	711.12	40°07'50.470"N	104°39'02.991"W	0.00	
7917.00†	89.802	180.143	7030.07	-394.91	393.14	710.87	40°07'49.481"N	104°39'02.995"W	0.00	
8017.00†	89.802	180.143	7030.41	-294.92	293.14	710.62	40°07'48.493"N	104°39'02.998"W	0.00	
8117.00†	89.802	180.143	7030.76	-194.92	193.14	710.37	40°07'47.504"N	104°39'03.001"W	0.00	
8217.00†	89.802	180.143	7031.10	-94.92	93.14	710.12	40°07'46.516"N	104°39'03.004"W	0.00	
8317.00†	89.802	180.143	7031.45	5.08	-6.85	709.87	40°07'45.527"N	104°39'03.008"W	0.00	
8417.00†	89.802	180.143	7031.80	105.08	-106.85	709.62	40°07'44.539"N	104°39'03.011"W	0.00	
8517.00†	89.802	180.143	7032.14	205.08	-206.85	709.37	40°07'43.550"N	104°39'03.014"W	0.00	
8617.00†	89.802	180.143	7032.49	305.08	-306.85	709.12	40°07'42.561"N	104°39'03.017"W	0.00	
8717.00†	89.802	180.143	7032.83	405.08	-406.85	708.87	40°07'41.573"N	104°39'03.021"W	0.00	
8817.00†	89.802	180.143	7033.18	505.08	-506.85	708.62	40°07'40.584"N	104°39'03.024"W	0.00	
8917.00†	89.802	180.143	7033.53	605.08	-606.85	708.37	40°07'39.596"N	104°39'03.027"W	0.00	
9017.00†	89.802	180.143	7033.87	705.08	-706.85	708.12	40°07'38.607"N	104°39'03.030"W	0.00	
9117.00†	89.802	180.143	7034.22	805.08	-806.85	707.87	40°07'37.618"N	104°39'03.034"W	0.00	
9217.00†	89.802	180.143	7034.56	905.08	-906.85	707.62	40°07'36.630"N	104°39'03.037"W	0.00	
9317.00†	89.802	180.143	7034.91	1005.08	-1006.85	707.37	40°07'35.641"N	104°39'03.040"W	0.00	
9417.00†	89.802	180.143	7035.26	1105.08	-1106.84	707.12	40°07'34.653"N	104°39'03.043"W	0.00	
9517.00†	89.802	180.143	7035.60	1205.08	-1206.84	706.88	40°07'33.664"N	104°39'03.047"W	0.00	
9617.00†	89.802	180.143	7035.95	1305.08	-1306.84	706.63	40°07'32.676"N	104°39'03.050"W	0.00	
9717.00†	89.802	180.143	7036.29	1405.07	-1406.84	706.38	40°07'31.687"N	104°39'03.053"W	0.00	
9817.00†	89.802	180.143	7036.64	1505.07	-1506.84	706.13	40°07'30.698"N	104°39'03.056"W	0.00	
9917.00†	89.802	180.143	7036.99	1605.07	-1606.84	705.88	40°07'29.710"N	104°39'03.060"W	0.00	
10017.00†	89.802	180.143	7037.33	1705.07	-1706.84	705.63	40°07'28.721"N	104°39'03.063"W	0.00	
10117.00†	89.802	180.143	7037.68	1805.07	-1806.84	705.38	40°07'27.733"N	104°39'03.066"W	0.00	
10217.00†	89.802	180.143	7038.02	1905.07	-1906.84	705.13	40°07'26.744"N	104°39'03.069"W	0.00	
10317.00†	89.802	180.143	7038.37	2005.07	-2006.84	704.88	40°07'25.755"N	104°39'03.073"W	0.00	
10417.00†	89.802	180.143	7038.72	2105.07	-2106.84	704.63	40°07'24.767"N	104°39'03.076"W	0.00	
10517.00†	89.802	180.143	7039.06	2205.07	-2206.83	704.38	40°07'23.778"N	104°39'03.079"W	0.00	
10617.00†	89.802	180.143	7039.41	2305.07	-2306.83	704.13	40°07'22.790"N	104°39'03.082"W	0.00	
10717.00†	89.802	180.143	7039.75	2405.07	-2406.83	703.88	40°07'21.801"N	104°39'03.086"W	0.00	
10817.00†	89.802	180.143	7040.10	2505.07	-2506.83	703.63	40°07'20.812"N	104°39'03.089"W	0.00	
10917.00†	89.802	180.143	7040.45	2605.07	-2606.83	703.38	40°07'19.824"N	104°39'03.092"W	0.00	
11017.00†	89.802	180.143	7040.79	2705.07	-2706.83	703.13	40°07'18.835"N	104°39'03.095"W	0.00	
11117.00†	89.802	180.143	7041.14	2805.07	-2806.83	702.88	40°07'17.847"N	104°39'03.099"W	0.00	
11217.00†	89.802	180.143	7041.48	2905.07	-2906.83	702.64	40°07'16.858"N	104°39'03.102"W	0.00	
11317.00†	89.802	180.143	7041.83	3005.07	-3006.83	702.39	40°07'15.870"N	104°39'03.105"W	0.00	
11417.00†	89.802	180.143	7042.18	3105.06	-3106.83	702.14	40°07'14.881"N	104°39'03.108"W	0.00	
11517.00†	89.802	180.143	7042.52	3205.06	-3206.83	701.89	40°07'13.892"N	104°39'03.112"W	0.00	
11617.00†	89.802	180.143	7042.87	3305.06	-3306.82	701.64	40°07'12.904"N	104°39'03.115"W	0.00	
11717.00†	89.802	180.143	7043.21	3405.06	-3406.82	701.39	40°07'11.915"N	104°39'03.118"W	0.00	
11817.00†	89.802	180.143	7043.56	3505.06	-3506.82	701.14	40°07'10.927"N	104°39'03.121"W	0.00	
11917.00†	89.802	180.143	7043.91	3605.06	-3606.82	700.89	40°07'09.938"N	104°39'03.125"W	0.00	
12017.00†	89.802	180.143	7044.25	3705.06	-3706.82	700.64	40°07'08.949"N	104°39'03.128"W	0.00	
12117.00†	89.802	180.143	7044.60	3805.06	-3806.82	700.39	40°07'07.961"N	104°39'03.131"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#07 POWERS 36N-22HZ
Area	Compass Import	Well	POWERS 36N-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 36N-22HZ PWB
Facility	2N-65W-22 Offsets		

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
12217.00†	89.802	180.143	7044.94	3905.06	-3906.82	700.14	40°07'06.972"N	104°39'03.134"W	0.00	
12317.00†	89.802	180.143	7045.29	4005.06	-4006.82	699.89	40°07'05.984"N	104°39'03.138"W	0.00	
12417.00†	89.802	180.143	7045.64	4105.06	-4106.82	699.64	40°07'04.995"N	104°39'03.141"W	0.00	
12517.00†	89.802	180.143	7045.98	4205.06	-4206.82	699.39	40°07'04.006"N	104°39'03.144"W	0.00	
12617.00†	89.802	180.143	7046.33	4305.06	-4306.82	699.14	40°07'03.018"N	104°39'03.147"W	0.00	
12717.00†	89.802	180.143	7046.67	4405.06	-4406.81	698.89	40°07'02.029"N	104°39'03.151"W	0.00	
12811.45	89.802	180.143	7047.00†	4499.51	-4501.26	698.66	40°07'01.096"N	104°39'03.154"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS									
- Ref Wellbore: POWERS 36N-22HZ PWB					Ref Wellpath: POWERS 36N-22HZ (PERMIT REV-3) 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
8.5in Open Hole	1362.00	12811.45	11449.45	1362.00	7047.00	0.00	0.00	-4501.26	698.66
5.5in Casing Production	17.00	12811.45	12794.45	17.00	7047.00	0.00	0.00	-4501.26	698.66

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
POWERS 36N-22HZ_SHL		4900.00	0.00	0.00	1737306.04	14574017.88	40°07'45.595"N	104°39'12.150"W	point
SEC.22-T2N-R65W		4900.00	0.40	-89.99	1737216.05	14574017.94	40°07'45.599"N	104°39'13.309"W	polygon
1) POWERS 36N-22HZ_BHL	12811.45	7047.00	-4501.26	698.66	1738022.25	14569519.39	40°07'01.096"N	104°39'03.154"W	point

SURVEY PROGRAM - Ref Wellbore: POWERS 36N-22HZ PWB Ref Wellpath: POWERS 36N-22HZ (PERMIT REV-3) PWP									
Start MD [ft]	End MD [ft]	Positional Uncertainty Model					Log Name/Comment	Wellbore	
17.00	12811.45	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (MagVAR IFR Wattenberg)						POWERS 36N-22HZ PWB	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#07 POWERS 36N-22HZ
Area	Compass Import	Well	POWERS 36N-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 36N-22HZ PWB
Facility	2N-65W-22 Offsets		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1312.00	0.000	29.290	1312.00	Fox Hills Marker	
4536.48	22.000	29.290	4365.00	Sussex	
7190.67	47.875	180.143	6881.00	Sharon Springs	
7292.03	58.010	180.143	6942.00	Niobrara Top	
7410.60	69.868	180.143	6994.00	Niobrara B Bench	
7609.94	89.802	180.143	7029.00	Top of Production	

DESIGN COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
17.00	0.000	29.290	17.00	TIE-ON	
1450.00	0.000	29.290	1450.00	BEGIN NUDGE	
2550.00	22.000	29.290	2523.17	END NUDGE	
5327.04	22.000	29.290	5098.00	BEGIN DROP	
6427.04	0.000	180.143	6171.17	END DROP	
6711.92	0.000	180.143	6456.05	KOP, BUILD @ 10°/100'	
7609.94	89.802	180.143	7029.00	LANDING POINT	
12811.45	89.802	180.143	7047.00	TOTAL DEPTH	