

KERR-MCGEE OIL & GAS ONSHORE LP_1



Location: Compass Import Slot: SLOT#06 POWERS 14C-22HZ
Field: WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH) Well: POWERS 14C-22HZ
Facility: 2N-65W-22 Offsets Wellbore: POWERS 14C-22HZ PWB

Plot reference wellpath is POWERS 14C-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#06 POWERS 14C-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#06 POWERS 14C-22HZ	4455.02	-981.68	1737276.148	14574017.767	40°07'45.595"N	104°39'12.535"W
PERMIT (17KB) (RKB) to Mud line (At Slot: SLOT#06 POWERS 14C-22HZ)					4900ft	
Mean Sea Level to Mud line (At Slot: SLOT#06 POWERS 14C-22HZ)					0ft	
PERMIT (17KB) (RKB) to Mean Sea Level					4900ft	

Survey Program

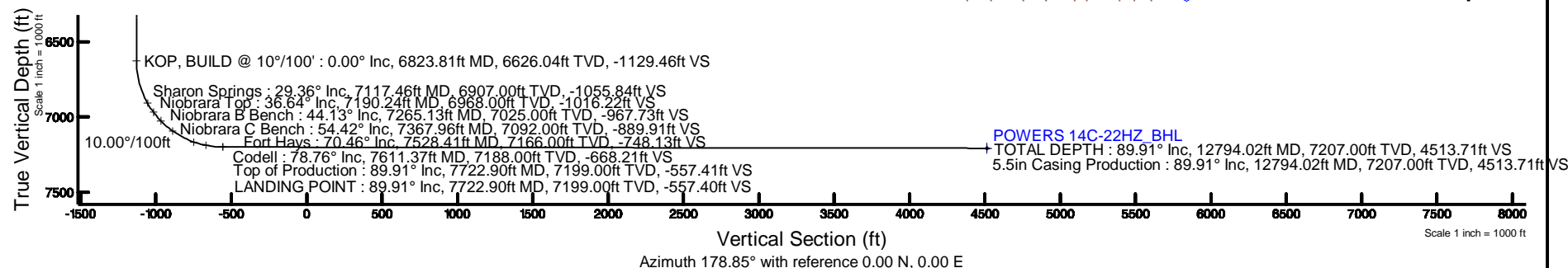
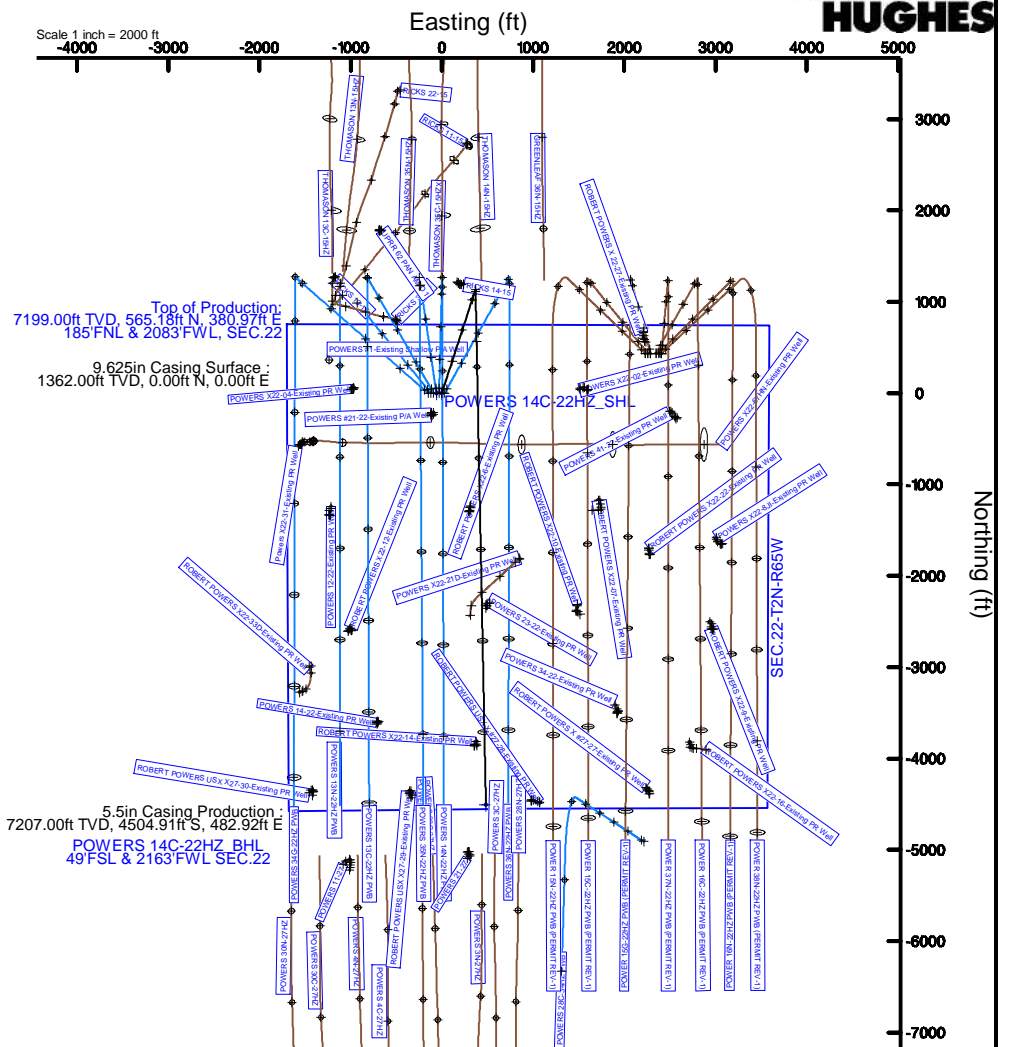
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	12794.02	ISCWSA MWD, Rev. 2, axial magnetic correction	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (MagVAR IPR Wattenberg)		POWERS 14C-22HZ PWB

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	18.000	17.00	0.00	0.00	0.00	0.00
BEGIN NUDGE	1450.00	0.000	18.000	1450.00	0.00	0.00	0.00	0.00
END NUDGE	2500.00	21.000	18.000	2476.65	180.97	58.80	2.00	-179.75
BEGIN DROP	4774.42	21.000	18.000	4600.00	956.15	310.67	0.00	-949.71
END DROP	5824.42	0.000	178.848	5626.65	1137.12	369.47	2.00	-1129.46
KOP, BUILD @ 10°/100'	6823.81	0.000	178.848	6626.04	1137.12	369.47	0.00	-1129.46
LANDING POINT	7722.90	89.910	178.848	7199.00	565.18	380.97	10.00	-557.40
TOTAL DEPTH	12794.02	89.910	178.848	7207.00	-4504.91	482.92	0.00	4513.71

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
POWERS 14C-22HZ_SHL		4900.00	0.00	0.00	1737276.15	14574017.77	40°07'45.595"N	104°39'12.535"W
SEC.22-T2N-R65W		4900.00	0.40	-60.10	1737216.05	14574017.94	40°07'45.599"N	104°39'13.309"W
POWERS 14C-22HZ_BHL	12794.02	7207.00	-4504.91	482.92	1737776.62	14569514.78	40°07'01.060"N	104°39'06.317"W



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#06 POWERS 14C-22HZ
Area	Compass Import	Well	POWERS 14C-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 14C-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 1:52:50 PM
Convergence at slot	0.22° East	Database/Source file	WellArchitectDC/POWERS_14C-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	-981.68	1737276.15	14574017.77	40°07'45.595"N	104°39'12.535"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#06 POWERS 14C-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	178.85°

Planned Wellpath Report

POWERS 14C-22HZ (PERMIT REV-3) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#06 POWERS 14C-22HZ
Area	Compass Import	Well	POWERS 14C-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 14C-22HZ PWB
Facility	2N-65W-22 Offsets		

WELLPATH DATA (145 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	18.000	0.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
17.00	0.000	18.000	17.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	TIE-ON
117.00†	0.000	18.000	117.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
217.00†	0.000	18.000	217.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
317.00†	0.000	18.000	317.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
417.00†	0.000	18.000	417.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
517.00†	0.000	18.000	517.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
617.00†	0.000	18.000	617.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
717.00†	0.000	18.000	717.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
817.00†	0.000	18.000	817.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
917.00†	0.000	18.000	917.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
1017.00†	0.000	18.000	1017.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
1117.00†	0.000	18.000	1117.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
1217.00†	0.000	18.000	1217.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
1312.00†	0.000	18.000	1312.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	Fox Hills Base
1317.00†	0.000	18.000	1317.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
1417.00†	0.000	18.000	1417.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	
1450.00	0.000	18.000	1450.00	0.00	0.00	0.00	40°07'45.595"N	104°39'12.535"W	0.00	BEGIN NUDGE
1517.00†	1.340	18.000	1516.99	-0.74	0.75	0.24	40°07'45.602"N	104°39'12.532"W	2.00	
1617.00†	3.340	18.000	1616.91	-4.60	4.63	1.50	40°07'45.641"N	104°39'12.516"W	2.00	
1717.00†	5.340	18.000	1716.61	-11.75	11.82	3.84	40°07'45.712"N	104°39'12.486"W	2.00	
1817.00†	7.340	18.000	1816.00	-22.18	22.33	7.25	40°07'45.816"N	104°39'12.442"W	2.00	
1917.00†	9.340	18.000	1914.93	-35.88	36.12	11.74	40°07'45.952"N	104°39'12.384"W	2.00	
2017.00†	11.340	18.000	2013.31	-52.83	53.19	17.28	40°07'46.121"N	104°39'12.312"W	2.00	
2117.00†	13.340	18.000	2110.99	-73.02	73.51	23.89	40°07'46.322"N	104°39'12.227"W	2.00	
2217.00†	15.340	18.000	2207.87	-96.41	97.07	31.54	40°07'46.555"N	104°39'12.129"W	2.00	
2317.00†	17.340	18.000	2303.83	-122.99	123.82	40.23	40°07'46.819"N	104°39'12.017"W	2.00	
2417.00†	19.340	18.000	2398.74	-152.71	153.75	49.96	40°07'47.115"N	104°39'11.892"W	2.00	
2500.00	21.000	18.000	2476.65	-179.75	180.97	58.80	40°07'47.384"N	104°39'11.778"W	2.00	END NUDGE
2517.00†	21.000	18.000	2492.52	-185.50	186.76	60.68	40°07'47.441"N	104°39'11.753"W	0.00	
2617.00†	21.000	18.000	2585.88	-219.35	220.84	71.76	40°07'47.778"N	104°39'11.611"W	0.00	
2717.00†	21.000	18.000	2679.24	-253.21	254.92	82.83	40°07'48.115"N	104°39'11.468"W	0.00	
2817.00†	21.000	18.000	2772.59	-287.06	289.01	93.90	40°07'48.452"N	104°39'11.326"W	0.00	
2917.00†	21.000	18.000	2865.95	-320.91	323.09	104.98	40°07'48.789"N	104°39'11.183"W	0.00	
3017.00†	21.000	18.000	2959.31	-354.77	357.17	116.05	40°07'49.126"N	104°39'11.040"W	0.00	
3117.00†	21.000	18.000	3052.67	-388.62	391.26	127.13	40°07'49.463"N	104°39'10.898"W	0.00	
3217.00†	21.000	18.000	3146.03	-422.47	425.34	138.20	40°07'49.800"N	104°39'10.755"W	0.00	
3317.00†	21.000	18.000	3239.38	-456.33	459.42	149.28	40°07'50.137"N	104°39'10.612"W	0.00	
3417.00†	21.000	18.000	3332.74	-490.18	493.50	160.35	40°07'50.474"N	104°39'10.470"W	0.00	
3517.00†	21.000	18.000	3426.10	-524.03	527.59	171.42	40°07'50.811"N	104°39'10.327"W	0.00	
3617.00†	21.000	18.000	3519.46	-557.89	561.67	182.50	40°07'51.148"N	104°39'10.185"W	0.00	
3717.00†	21.000	18.000	3612.82	-591.74	595.75	193.57	40°07'51.485"N	104°39'10.042"W	0.00	
3817.00†	21.000	18.000	3706.17	-625.59	629.84	204.65	40°07'51.822"N	104°39'09.899"W	0.00	
3917.00†	21.000	18.000	3799.53	-659.45	663.92	215.72	40°07'52.158"N	104°39'09.757"W	0.00	
4017.00†	21.000	18.000	3892.89	-693.30	698.00	226.79	40°07'52.495"N	104°39'09.614"W	0.00	

Planned Wellpath Report

POWERS 14C-22HZ (PERMIT REV-3) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#06 POWERS 14C-22HZ
Area	Compass Import	Well	POWERS 14C-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 14C-22HZ PWB
Facility	2N-65W-22 Offsets		

WELLPATH DATA (145 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00†	21.000	18.000	3986.25	-727.15	732.08	237.87	40°07'52.832"N	104°39'09.471"W	0.00	
4217.00†	21.000	18.000	4079.61	-761.01	766.17	248.94	40°07'53.169"N	104°39'09.329"W	0.00	
4317.00†	21.000	18.000	4172.96	-794.86	800.25	260.02	40°07'53.506"N	104°39'09.186"W	0.00	
4417.00†	21.000	18.000	4266.32	-828.71	834.33	271.09	40°07'53.843"N	104°39'09.044"W	0.00	
4517.00†	21.000	18.000	4359.68	-862.57	868.42	282.17	40°07'54.180"N	104°39'08.901"W	0.00	
4522.70†	21.000	18.000	4365.00	-864.50	870.36	282.80	40°07'54.199"N	104°39'08.893"W	0.00	Sussex
4617.00†	21.000	18.000	4453.04	-896.42	902.50	293.24	40°07'54.517"N	104°39'08.758"W	0.00	
4717.00†	21.000	18.000	4546.40	-930.27	936.58	304.31	40°07'54.854"N	104°39'08.616"W	0.00	
4774.42	21.000	18.000	4600.00	-949.71	956.15	310.67	40°07'55.047"N	104°39'08.534"W	0.00	BEGIN DROP
4817.00†	20.148	18.000	4639.87	-963.85	970.38	315.30	40°07'55.188"N	104°39'08.474"W	2.00	
4917.00†	18.148	18.000	4734.33	-994.83	1001.58	325.43	40°07'55.497"N	104°39'08.344"W	2.00	
5017.00†	16.148	18.000	4829.88	-1022.68	1029.62	334.54	40°07'55.774"N	104°39'08.226"W	2.00	
5117.00†	14.148	18.000	4926.40	-1047.37	1054.47	342.62	40°07'56.019"N	104°39'08.122"W	2.00	
5217.00†	12.148	18.000	5023.77	-1068.85	1076.10	349.65	40°07'56.233"N	104°39'08.032"W	2.00	
5317.00†	10.148	18.000	5121.88	-1087.12	1094.49	355.62	40°07'56.415"N	104°39'07.955"W	2.00	
5417.00†	8.148	18.000	5220.60	-1102.14	1109.61	360.53	40°07'56.565"N	104°39'07.891"W	2.00	
5517.00†	6.148	18.000	5319.82	-1113.89	1121.44	364.38	40°07'56.682"N	104°39'07.842"W	2.00	
5617.00†	4.148	18.000	5419.41	-1122.37	1129.98	367.15	40°07'56.766"N	104°39'07.806"W	2.00	
5717.00†	2.148	18.000	5519.26	-1127.56	1135.20	368.85	40°07'56.818"N	104°39'07.784"W	2.00	
5817.00†	0.148	18.000	5619.23	-1129.45	1137.11	369.47	40°07'56.836"N	104°39'07.776"W	2.00	
5824.42	0.000	178.848	5626.65	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	2.00	END DROP
5917.00†	0.000	178.848	5719.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6017.00†	0.000	178.848	5819.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6117.00†	0.000	178.848	5919.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6217.00†	0.000	178.848	6019.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6317.00†	0.000	178.848	6119.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6417.00†	0.000	178.848	6219.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6517.00†	0.000	178.848	6319.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6617.00†	0.000	178.848	6419.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6717.00†	0.000	178.848	6519.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6817.00†	0.000	178.848	6619.23	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	
6823.81	0.000	178.848	6626.04	-1129.46	1137.12	369.47	40°07'56.836"N	104°39'07.776"W	0.00	KOP, BUILD @ 10°/100'
6917.00†	9.319	178.848	6718.82	-1121.90	1129.56	369.62	40°07'56.762"N	104°39'07.774"W	10.00	
7017.00†	19.319	178.848	6815.59	-1097.19	1104.86	370.12	40°07'56.518"N	104°39'07.768"W	10.00	
7117.00†	29.319	178.848	6906.60	-1056.06	1063.74	370.95	40°07'56.111"N	104°39'07.757"W	10.00	
7117.46†	29.365	178.848	6907.00	-1055.84	1063.51	370.95	40°07'56.109"N	104°39'07.757"W	10.00	Sharon Springs
7190.24†	36.644	178.848	6968.00	-1016.22	1023.90	371.75	40°07'55.717"N	104°39'07.747"W	10.00	Niobrara Top
7217.00†	39.319	178.848	6989.09	-999.76	1007.44	372.08	40°07'55.554"N	104°39'07.743"W	10.00	
7265.13†	44.132	178.848	7025.00	-967.73	975.42	372.72	40°07'55.238"N	104°39'07.735"W	10.00	Niobrara B Bench
7317.00†	49.319	178.848	7060.54	-929.98	937.68	373.48	40°07'54.865"N	104°39'07.725"W	10.00	
7367.96†	54.415	178.848	7092.00	-889.91	897.61	374.29	40°07'54.469"N	104°39'07.714"W	10.00	Niobrara C Bench
7417.00†	59.319	178.848	7118.80	-848.85	856.57	375.11	40°07'54.063"N	104°39'07.704"W	10.00	
7517.00†	69.319	178.848	7162.08	-758.85	766.58	376.92	40°07'53.173"N	104°39'07.680"W	10.00	
7528.41†	70.460	178.848	7166.00	-748.13	755.87	377.14	40°07'53.067"N	104°39'07.678"W	10.00	Fort Hays
7611.37†	78.757	178.848	7188.00	-668.21	675.97	378.74	40°07'52.278"N	104°39'07.657"W	10.00	Codell

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#06 POWERS 14C-22HZ
Area	Compass Import	Well	POWERS 14C-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 14C-22HZ PWB
Facility	2N-65W-22 Offsets		

WELLPATH DATA (145 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7617.00†	79.319	178.848	7189.07	-662.69	670.44	378.86	40°07'52.223"N	104°39'07.656"W	10.00	
7717.00†	89.319	178.848	7198.96	-563.31	571.08	380.85	40°07'51.241"N	104°39'07.630"W	10.00	
7722.90†	89.909	178.848	7199.00	-557.41	565.18	380.97	40°07'51.182"N	104°39'07.628"W	10.00	Top of Production
7722.90	89.910	178.848	7199.00	-557.40	565.18	380.97	40°07'51.182"N	104°39'07.628"W	10.00	LANDING POINT
7817.00†	89.910	178.848	7199.14	-463.31	471.10	382.86	40°07'50.252"N	104°39'07.604"W	0.00	
7917.00†	89.910	178.848	7199.30	-363.31	371.12	384.87	40°07'49.264"N	104°39'07.578"W	0.00	
8017.00†	89.910	178.848	7199.46	-263.31	271.14	386.88	40°07'48.275"N	104°39'07.552"W	0.00	
8117.00†	89.910	178.848	7199.62	-163.31	171.16	388.89	40°07'47.287"N	104°39'07.526"W	0.00	
8217.00†	89.910	178.848	7199.78	-63.31	71.18	390.90	40°07'46.299"N	104°39'07.501"W	0.00	
8317.00†	89.910	178.848	7199.93	36.69	-28.80	392.92	40°07'45.310"N	104°39'07.475"W	0.00	
8417.00†	89.910	178.848	7200.09	136.69	-128.78	394.93	40°07'44.322"N	104°39'07.449"W	0.00	
8517.00†	89.910	178.848	7200.25	236.69	-228.76	396.94	40°07'43.333"N	104°39'07.423"W	0.00	
8617.00†	89.910	178.848	7200.41	336.69	-328.74	398.95	40°07'42.345"N	104°39'07.397"W	0.00	
8717.00†	89.910	178.848	7200.56	436.69	-428.72	400.96	40°07'41.357"N	104°39'07.371"W	0.00	
8817.00†	89.910	178.848	7200.72	536.69	-528.70	402.97	40°07'40.368"N	104°39'07.345"W	0.00	
8917.00†	89.910	178.848	7200.88	636.69	-628.68	404.98	40°07'39.380"N	104°39'07.319"W	0.00	
9017.00†	89.910	178.848	7201.04	736.69	-728.66	406.99	40°07'38.392"N	104°39'07.294"W	0.00	
9117.00†	89.910	178.848	7201.20	836.69	-828.64	409.00	40°07'37.403"N	104°39'07.268"W	0.00	
9217.00†	89.910	178.848	7201.35	936.69	-928.62	411.01	40°07'36.415"N	104°39'07.242"W	0.00	
9317.00†	89.910	178.848	7201.51	1036.69	-1028.59	413.02	40°07'35.426"N	104°39'07.216"W	0.00	
9417.00†	89.910	178.848	7201.67	1136.69	-1128.57	415.03	40°07'34.438"N	104°39'07.190"W	0.00	
9517.00†	89.910	178.848	7201.83	1236.69	-1228.55	417.04	40°07'33.450"N	104°39'07.164"W	0.00	
9617.00†	89.910	178.848	7201.99	1336.69	-1328.53	419.05	40°07'32.461"N	104°39'07.138"W	0.00	
9717.00†	89.910	178.848	7202.14	1436.69	-1428.51	421.06	40°07'31.473"N	104°39'07.112"W	0.00	
9817.00†	89.910	178.848	7202.30	1536.69	-1528.49	423.07	40°07'30.484"N	104°39'07.087"W	0.00	
9917.00†	89.910	178.848	7202.46	1636.69	-1628.47	425.08	40°07'29.496"N	104°39'07.061"W	0.00	
10017.00†	89.910	178.848	7202.62	1736.69	-1728.45	427.09	40°07'28.508"N	104°39'07.035"W	0.00	
10117.00†	89.910	178.848	7202.77	1836.69	-1828.43	429.10	40°07'27.519"N	104°39'07.009"W	0.00	
10217.00†	89.910	178.848	7202.93	1936.69	-1928.41	431.11	40°07'26.531"N	104°39'06.983"W	0.00	
10317.00†	89.910	178.848	7203.09	2036.69	-2028.39	433.12	40°07'25.542"N	104°39'06.957"W	0.00	
10417.00†	89.910	178.848	7203.25	2136.69	-2128.37	435.13	40°07'24.554"N	104°39'06.931"W	0.00	
10517.00†	89.910	178.848	7203.41	2236.69	-2228.35	437.14	40°07'23.566"N	104°39'06.906"W	0.00	
10617.00†	89.910	178.848	7203.56	2336.69	-2328.33	439.15	40°07'22.577"N	104°39'06.880"W	0.00	
10717.00†	89.910	178.848	7203.72	2436.69	-2428.31	441.16	40°07'21.589"N	104°39'06.854"W	0.00	
10817.00†	89.910	178.848	7203.88	2536.69	-2528.29	443.17	40°07'20.600"N	104°39'06.828"W	0.00	
10917.00†	89.910	178.848	7204.04	2636.69	-2628.27	445.18	40°07'19.612"N	104°39'06.802"W	0.00	
11017.00†	89.910	178.848	7204.20	2736.69	-2728.25	447.20	40°07'18.624"N	104°39'06.776"W	0.00	
11117.00†	89.910	178.848	7204.35	2836.69	-2828.23	449.21	40°07'17.635"N	104°39'06.750"W	0.00	
11217.00†	89.910	178.848	7204.51	2936.69	-2928.21	451.22	40°07'16.647"N	104°39'06.724"W	0.00	
11317.00†	89.910	178.848	7204.67	3036.69	-3028.19	453.23	40°07'15.658"N	104°39'06.699"W	0.00	
11417.00†	89.910	178.848	7204.83	3136.69	-3128.17	455.24	40°07'14.670"N	104°39'06.673"W	0.00	
11517.00†	89.910	178.848	7204.98	3236.69	-3228.15	457.25	40°07'13.682"N	104°39'06.647"W	0.00	
11617.00†	89.910	178.848	7205.14	3336.69	-3328.13	459.26	40°07'12.693"N	104°39'06.621"W	0.00	
11717.00†	89.910	178.848	7205.30	3436.69	-3428.11	461.27	40°07'11.705"N	104°39'06.595"W	0.00	
11817.00†	89.910	178.848	7205.46	3536.69	-3528.09	463.28	40°07'10.716"N	104°39'06.569"W	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#06 POWERS 14C-22HZ
Area	Compass Import	Well	POWERS 14C-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 14C-22HZ PWB
Facility	2N-65W-22 Offsets		

WELLPATH DATA (145 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11917.00†	89.910	178.848	7205.62	3636.69	-3628.07	465.29	40°07'09.728"N	104°39'06.543"W	0.00	
12017.00†	89.910	178.848	7205.77	3736.69	-3728.05	467.30	40°07'08.740"N	104°39'06.518"W	0.00	
12117.00†	89.910	178.848	7205.93	3836.69	-3828.03	469.31	40°07'07.751"N	104°39'06.492"W	0.00	
12217.00†	89.910	178.848	7206.09	3936.69	-3928.01	471.32	40°07'06.763"N	104°39'06.466"W	0.00	
12317.00†	89.910	178.848	7206.25	4036.69	-4027.98	473.33	40°07'05.774"N	104°39'06.440"W	0.00	
12417.00†	89.910	178.848	7206.40	4136.69	-4127.96	475.34	40°07'04.786"N	104°39'06.414"W	0.00	
12517.00†	89.910	178.848	7206.56	4236.69	-4227.94	477.35	40°07'03.798"N	104°39'06.388"W	0.00	
12617.00†	89.910	178.848	7206.72	4336.69	-4327.92	479.36	40°07'02.809"N	104°39'06.362"W	0.00	
12717.00†	89.910	178.848	7206.88	4436.69	-4427.90	481.37	40°07'01.821"N	104°39'06.337"W	0.00	
12794.02	89.910	178.848	7207.00†	4513.71	-4504.91	482.92	40°07'01.060"N	104°39'06.317"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS									
- Ref Wellbore: POWERS 14C-22HZ PWB Ref Wellpath: POWERS 14C-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	12794.02	11432.02	1362.00	7207.00	0.00	0.00	-4504.91	482.92
5.5in Casing Production	17.00	12794.02	12777.02	17.00	7207.00	0.00	0.00	-4504.91	482.92

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
POWERS 14C-22HZ_SHL		4900.00	0.00	0.00	1737276.15	14574017.77	40°07'45.595"N	104°39'12.535"W	point
SEC.22-T2N-R65W		4900.00	0.40	-60.10	1737216.05	14574017.94	40°07'45.599"N	104°39'13.309"W	polygon
1) POWERS 14C-22HZ_BHL	12794.02	7207.00	-4504.91	482.92	1737776.62	14569514.78	40°07'01.060"N	104°39'06.317"W	point

SURVEY PROGRAM - Ref Wellbore: POWERS 14C-22HZ PWB Ref Wellpath: POWERS 14C-22HZ (PERMIT REV-3) PWP									
Start MD [ft]	End MD [ft]	Positional Uncertainty Model					Log Name/Comment	Wellbore	
17.00	12794.02	ISCWSA MWD, Rev. 2, axial magnetic correction (Standard) (MagVAR IFR Wattenberg)						POWERS 14C-22HZ PWB	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP_1	Slot	SLOT#06 POWERS 14C-22HZ
Area	Compass Import	Well	POWERS 14C-22HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TRUE NORTH)	Wellbore	POWERS 14C-22HZ PWB
Facility	2N-65W-22 Offsets		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1312.00	0.000	18.000	1312.00	Fox Hills Base
4522.70	21.000	18.000	4365.00	Sussex
7117.46	29.365	178.848	6907.00	Sharon Springs
7190.24	36.644	178.848	6968.00	Niobrara Top
7265.13	44.132	178.848	7025.00	Niobrara B Bench
7367.96	54.415	178.848	7092.00	Niobrara C Bench
7528.41	70.460	178.848	7166.00	Fort Hays
7611.37	78.757	178.848	7188.00	Codell
7722.90	89.909	178.848	7199.00	Top of Production

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	18.000	17.00	TIE-ON
1450.00	0.000	18.000	1450.00	BEGIN NUDGE
2500.00	21.000	18.000	2476.65	END NUDGE
4774.42	21.000	18.000	4600.00	BEGIN DROP
5824.42	0.000	178.848	5626.65	END DROP
6823.81	0.000	178.848	6626.04	KOP, BUILD @ 10°/100'
7722.90	89.910	178.848	7199.00	LANDING POINT
12794.02	89.910	178.848	7207.00	TOTAL DEPTH