



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 POWERS 28C-34HZ
Area	Compass Import	Well	POWERS 28C-34HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TN)	Wellbore	POWERS 28C-34HZ PWB
Facility	2N-65W-27 Powers 27-1 Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Amarcar
Scale	0.999611	Report Generated	22/Apr/2015 at 10:45
Convergence at slot	0.23° East	Database/Source file	MAP CHECK./_POWERS_28C-34HZ_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	998.08	3702.52	1739507.85	14569115.96	40°06'57.049"N	104°38'44.045"W
Facility Reference Pt			1735809.20	14568103.69	40°06'47.185"N	104°39'31.720"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-27 Offsets vertical datum	4942.00ft
Horizontal Reference Pt	Slot	PERMIT (17'KB) (RKB) to Mean Sea Level	4942.00ft
Vertical Reference Pt	PERMIT (17'KB) (RKB)	PERMIT (17'KB) (RKB) to Mud Line at Slot (SLOT#01 POWERS 28C-34HZ)	4942.00ft
MD Reference Pt	PERMIT (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	181.78°

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WELLPATH DATA (143 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	301.378	0.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
17.00	0.000	301.378	17.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	TIE-ON
117.00†	0.000	301.378	117.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
217.00†	0.000	301.378	217.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
317.00†	0.000	301.378	317.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
417.00†	0.000	301.378	417.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
517.00†	0.000	301.378	517.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
617.00†	0.000	301.378	617.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
717.00†	0.000	301.378	717.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
817.00†	0.000	301.378	817.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
917.00†	0.000	301.378	917.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
1017.00†	0.000	301.378	1017.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
1117.00†	0.000	301.378	1117.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
1217.00†	0.000	301.378	1217.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
1317.00†	0.000	301.378	1317.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
1417.00†	0.000	301.378	1417.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
1517.00†	0.000	301.378	1517.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	
1600.00	0.000	301.378	1600.00	0.00	0.00	0.00	40°06'57.049"N	104°38'44.045"W	0.00	BEGIN NUDGE
1617.00†	0.340	301.378	1617.00	-0.02	0.03	-0.04	40°06'57.050"N	104°38'44.045"W	2.00	
1717.00†	2.340	301.378	1716.97	-1.18	1.24	-2.04	40°06'57.062"N	104°38'44.071"W	2.00	
1817.00†	4.340	301.378	1816.79	-4.06	4.28	-7.01	40°06'57.092"N	104°38'44.135"W	2.00	
1917.00†	6.340	301.378	1916.35	-8.65	9.12	-14.96	40°06'57.139"N	104°38'44.237"W	2.00	
2017.00†	8.340	301.378	2015.53	-14.97	15.77	-25.86	40°06'57.205"N	104°38'44.378"W	2.00	
2116.22	10.324	301.378	2113.43	-22.91	24.15	-39.60	40°06'57.288"N	104°38'44.555"W	2.00	END NUDGE
2117.00†	10.324	301.378	2114.20	-22.98	24.22	-39.72	40°06'57.289"N	104°38'44.556"W	0.00	
2217.00†	10.324	301.378	2212.58	-31.84	33.56	-55.02	40°06'57.381"N	104°38'44.753"W	0.00	
2317.00†	10.324	301.378	2310.96	-40.69	42.89	-70.32	40°06'57.473"N	104°38'44.950"W	0.00	
2417.00†	10.324	301.378	2409.34	-49.54	52.22	-85.62	40°06'57.565"N	104°38'45.147"W	0.00	
2517.00†	10.324	301.378	2507.72	-58.39	61.55	-100.92	40°06'57.658"N	104°38'45.344"W	0.00	
2617.00†	10.324	301.378	2606.10	-67.25	70.88	-116.22	40°06'57.750"N	104°38'45.541"W	0.00	
2717.00†	10.324	301.378	2704.48	-76.10	80.22	-131.53	40°06'57.842"N	104°38'45.738"W	0.00	
2817.00†	10.324	301.378	2802.86	-84.95	89.55	-146.83	40°06'57.935"N	104°38'45.935"W	0.00	
2917.00†	10.324	301.378	2901.25	-93.81	98.88	-162.13	40°06'58.027"N	104°38'46.132"W	0.00	
3017.00†	10.324	301.378	2999.63	-102.66	108.21	-177.43	40°06'58.119"N	104°38'46.329"W	0.00	
3117.00†	10.324	301.378	3098.01	-111.51	117.54	-192.73	40°06'58.211"N	104°38'46.526"W	0.00	
3217.00†	10.324	301.378	3196.39	-120.37	126.87	-208.03	40°06'58.304"N	104°38'46.724"W	0.00	
3317.00†	10.324	301.378	3294.77	-129.22	136.21	-223.33	40°06'58.396"N	104°38'46.921"W	0.00	
3417.00†	10.324	301.378	3393.15	-138.07	145.54	-238.63	40°06'58.488"N	104°38'47.118"W	0.00	
3517.00†	10.324	301.378	3491.53	-146.93	154.87	-253.93	40°06'58.580"N	104°38'47.315"W	0.00	
3617.00†	10.324	301.378	3589.91	-155.78	164.20	-269.23	40°06'58.673"N	104°38'47.512"W	0.00	
3717.00†	10.324	301.378	3688.29	-164.63	173.53	-284.54	40°06'58.765"N	104°38'47.709"W	0.00	
3817.00†	10.324	301.378	3786.67	-173.49	182.87	-299.84	40°06'58.857"N	104°38'47.906"W	0.00	
3917.00†	10.324	301.378	3885.05	-182.34	192.20	-315.14	40°06'58.949"N	104°38'48.103"W	0.00	
4017.00†	10.324	301.378	3983.44	-191.19	201.53	-330.44	40°06'59.042"N	104°38'48.300"W	0.00	
4117.00†	10.324	301.378	4081.82	-200.04	210.86	-345.74	40°06'59.134"N	104°38'48.497"W	0.00	

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Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TN)	Wellbore	POWERS 28C-34HZ PWB
Facility	2N-65W-27 Powers 27-1 Pad		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	10.324	301.378	4180.20	-208.90	220.19	-361.04	40°06'59.226"N	104°38'48.694"W	0.00	
4317.00†	10.324	301.378	4278.58	-217.75	229.52	-376.34	40°06'59.318"N	104°38'48.891"W	0.00	
4417.00†	10.324	301.378	4376.96	-226.60	238.86	-391.64	40°06'59.411"N	104°38'49.088"W	0.00	
4517.00†	10.324	301.378	4475.34	-235.46	248.19	-406.94	40°06'59.503"N	104°38'49.285"W	0.00	
4582.72†	10.324	301.378	4540.00	-241.28	254.32	-417.00	40°06'59.563"N	104°38'49.414"W	0.00	SUSSEX
4617.00†	10.324	301.378	4573.72	-244.31	257.52	-422.24	40°06'59.595"N	104°38'49.482"W	0.00	
4717.00†	10.324	301.378	4672.10	-253.16	266.85	-437.54	40°06'59.687"N	104°38'49.679"W	0.00	
4817.00†	10.324	301.378	4770.48	-262.02	276.18	-452.85	40°06'59.780"N	104°38'49.876"W	0.00	
4917.00†	10.324	301.378	4868.86	-270.87	285.52	-468.15	40°06'59.872"N	104°38'50.073"W	0.00	
5017.00†	10.324	301.378	4967.24	-279.72	294.85	-483.45	40°06'59.964"N	104°38'50.270"W	0.00	
5117.00†	10.324	301.378	5065.62	-288.58	304.18	-498.75	40°07'00.056"N	104°38'50.467"W	0.00	
5217.00†	10.324	301.378	5164.01	-297.43	313.51	-514.05	40°07'00.149"N	104°38'50.664"W	0.00	
5317.00†	10.324	301.378	5262.39	-306.28	322.84	-529.35	40°07'00.241"N	104°38'50.861"W	0.00	
5417.00†	10.324	301.378	5360.77	-315.14	332.17	-544.65	40°07'00.333"N	104°38'51.058"W	0.00	
5517.00†	10.324	301.378	5459.15	-323.99	341.51	-559.95	40°07'00.425"N	104°38'51.255"W	0.00	
5617.00†	10.324	301.378	5557.53	-332.84	350.84	-575.25	40°07'00.518"N	104°38'51.452"W	0.00	
5717.00†	10.324	301.378	5655.91	-341.69	360.17	-590.55	40°07'00.610"N	104°38'51.649"W	0.00	
5817.00†	10.324	301.378	5754.29	-350.55	369.50	-605.86	40°07'00.702"N	104°38'51.846"W	0.00	
5917.00†	10.324	301.378	5852.67	-359.40	378.83	-621.16	40°07'00.794"N	104°38'52.043"W	0.00	
6017.00†	10.324	301.378	5951.05	-368.25	388.17	-636.46	40°07'00.887"N	104°38'52.240"W	0.00	
6117.00†	10.324	301.378	6049.43	-377.11	397.50	-651.76	40°07'00.979"N	104°38'52.437"W	0.00	
6217.00†	10.324	301.378	6147.81	-385.96	406.83	-667.06	40°07'01.071"N	104°38'52.634"W	0.00	
6317.00†	10.324	301.378	6246.20	-394.81	416.16	-682.36	40°07'01.163"N	104°38'52.831"W	0.00	
6417.00†	10.324	301.378	6344.58	-403.67	425.49	-697.66	40°07'01.256"N	104°38'53.028"W	0.00	
6517.00†	10.324	301.378	6442.96	-412.52	434.82	-712.96	40°07'01.348"N	104°38'53.225"W	0.00	
6543.47†	10.324	301.378	6469.00	-414.86	437.29	-717.01	40°07'01.372"N	104°38'53.278"W	0.00	SHARON SPRINGS
6617.00†	10.324	301.378	6541.34	-421.37	444.16	-728.26	40°07'01.440"N	104°38'53.422"W	0.00	
6711.20	10.324	301.378	6634.01	-429.71	452.95	-742.68	40°07'01.527"N	104°38'53.608"W	0.00	KOP, BUILD @ 10°/100'
6717.00†	10.054	298.477	6639.72	-430.20	453.46	-743.57	40°07'01.532"N	104°38'53.619"W	10.00	
6817.00†	10.538	240.165	6738.36	-429.32	453.07	-759.21	40°07'01.528"N	104°38'53.821"W	10.00	
6917.00†	17.870	211.211	6835.35	-411.12	435.35	-775.13	40°07'01.353"N	104°38'54.026"W	10.00	
7017.00†	26.944	199.944	6927.75	-376.14	400.85	-790.85	40°07'01.012"N	104°38'54.228"W	10.00	
7019.53†	27.181	199.752	6930.00	-375.05	399.76	-791.24	40°07'01.001"N	104°38'54.233"W	10.00	NIOBRARA TOP
7106.20†	35.439	194.645	7004.00	-331.64	356.74	-804.31	40°07'00.576"N	104°38'54.402"W	10.00	NIOBRARA B BENCH
7117.00†	36.480	194.155	7012.74	-325.45	350.60	-805.89	40°07'00.515"N	104°38'54.422"W	10.00	
7193.30†	43.881	191.266	7071.00	-277.14	302.60	-816.62	40°07'00.041"N	104°38'54.560"W	10.00	NIOBRARA C BENCH
7217.00†	46.192	190.525	7087.74	-260.59	286.13	-819.78	40°06'59.878"N	104°38'54.601"W	10.00	
7317.00†	55.986	187.922	7150.49	-183.52	209.41	-832.12	40°06'59.119"N	104°38'54.760"W	10.00	
7417.00†	65.823	185.863	7199.06	-96.60	122.77	-842.52	40°06'58.263"N	104°38'54.893"W	10.00	
7465.34†	70.588	184.985	7217.00	-51.82	78.10	-846.75	40°06'57.821"N	104°38'54.948"W	10.00	FORT HAYS
7517.00†	75.685	184.102	7231.98	-2.45	28.83	-850.66	40°06'57.334"N	104°38'54.998"W	10.00	
7554.10†	79.347	183.492	7240.00	33.74	-7.31	-853.06	40°06'56.977"N	104°38'55.029"W	10.00	CODELL
7617.00†	85.558	182.490	7248.26	96.05	-69.55	-856.31	40°06'56.362"N	104°38'55.071"W	10.00	
7662.53†	90.055	181.776	7250.00	141.53	-115.00	-858.00	40°06'55.912"N	104°38'55.093"W	10.00	TOP OF PRODUCTION
7662.53	90.055	181.776	7250.00	141.54	-115.00	-858.00	40°06'55.912"N	104°38'55.093"W	10.00	LANDING POINT

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7717.00†	90.055	181.776	7249.95	196.00	-169.44	-859.69	40°06'55.374"N	104°38'55.114"W	0.00	
7817.00†	90.055	181.776	7249.85	296.00	-269.39	-862.79	40°06'54.386"N	104°38'55.154"W	0.00	
7917.00†	90.055	181.776	7249.76	396.00	-369.35	-865.89	40°06'53.398"N	104°38'55.194"W	0.00	
8017.00†	90.055	181.776	7249.66	496.00	-469.30	-868.99	40°06'52.410"N	104°38'55.234"W	0.00	
8117.00†	90.055	181.776	7249.57	596.00	-569.25	-872.09	40°06'51.422"N	104°38'55.274"W	0.00	
8217.00†	90.055	181.776	7249.47	696.00	-669.20	-875.19	40°06'50.433"N	104°38'55.314"W	0.00	
8317.00†	90.055	181.776	7249.37	796.00	-769.15	-878.29	40°06'49.445"N	104°38'55.354"W	0.00	
8417.00†	90.055	181.776	7249.28	896.00	-869.11	-881.38	40°06'48.457"N	104°38'55.393"W	0.00	
8517.00†	90.055	181.776	7249.18	996.00	-969.06	-884.48	40°06'47.469"N	104°38'55.433"W	0.00	
8617.00†	90.055	181.776	7249.09	1096.00	-1069.01	-887.58	40°06'46.481"N	104°38'55.473"W	0.00	
8717.00†	90.055	181.776	7248.99	1196.00	-1168.96	-890.68	40°06'45.493"N	104°38'55.513"W	0.00	
8817.00†	90.055	181.776	7248.90	1296.00	-1268.91	-893.78	40°06'44.505"N	104°38'55.553"W	0.00	
8917.00†	90.055	181.776	7248.80	1396.00	-1368.87	-896.88	40°06'43.517"N	104°38'55.593"W	0.00	
9017.00†	90.055	181.776	7248.70	1496.00	-1468.82	-899.98	40°06'42.528"N	104°38'55.633"W	0.00	
9117.00†	90.055	181.776	7248.61	1596.00	-1568.77	-903.08	40°06'41.540"N	104°38'55.673"W	0.00	
9217.00†	90.055	181.776	7248.51	1696.00	-1668.72	-906.18	40°06'40.552"N	104°38'55.712"W	0.00	
9317.00†	90.055	181.776	7248.42	1796.00	-1768.67	-909.28	40°06'39.564"N	104°38'55.752"W	0.00	
9417.00†	90.055	181.776	7248.32	1896.00	-1868.62	-912.38	40°06'38.576"N	104°38'55.792"W	0.00	
9517.00†	90.055	181.776	7248.23	1996.00	-1968.58	-915.48	40°06'37.588"N	104°38'55.832"W	0.00	
9617.00†	90.055	181.776	7248.13	2096.00	-2068.53	-918.58	40°06'36.600"N	104°38'55.872"W	0.00	
9717.00†	90.055	181.776	7248.04	2196.00	-2168.48	-921.68	40°06'35.612"N	104°38'55.912"W	0.00	
9817.00†	90.055	181.776	7247.94	2296.00	-2268.43	-924.78	40°06'34.623"N	104°38'55.952"W	0.00	
9917.00†	90.055	181.776	7247.84	2396.00	-2368.38	-927.88	40°06'33.635"N	104°38'55.991"W	0.00	
10017.00†	90.055	181.776	7247.75	2496.00	-2468.34	-930.98	40°06'32.647"N	104°38'56.031"W	0.00	
10117.00†	90.055	181.776	7247.65	2596.00	-2568.29	-934.08	40°06'31.659"N	104°38'56.071"W	0.00	
10217.00†	90.055	181.776	7247.56	2696.00	-2668.24	-937.18	40°06'30.671"N	104°38'56.111"W	0.00	
10317.00†	90.055	181.776	7247.46	2796.00	-2768.19	-940.28	40°06'29.683"N	104°38'56.151"W	0.00	
10417.00†	90.055	181.776	7247.37	2896.00	-2868.14	-943.38	40°06'28.695"N	104°38'56.191"W	0.00	
10517.00†	90.055	181.776	7247.27	2996.00	-2968.10	-946.48	40°06'27.707"N	104°38'56.231"W	0.00	
10617.00†	90.055	181.776	7247.17	3096.00	-3068.05	-949.58	40°06'26.718"N	104°38'56.270"W	0.00	
10717.00†	90.055	181.776	7247.08	3196.00	-3168.00	-952.67	40°06'25.730"N	104°38'56.310"W	0.00	
10817.00†	90.055	181.776	7246.98	3296.00	-3267.95	-955.77	40°06'24.742"N	104°38'56.350"W	0.00	
10917.00†	90.055	181.776	7246.89	3396.00	-3367.90	-958.87	40°06'23.754"N	104°38'56.390"W	0.00	
11017.00†	90.055	181.776	7246.79	3496.00	-3467.86	-961.97	40°06'22.766"N	104°38'56.430"W	0.00	
11117.00†	90.055	181.776	7246.70	3596.00	-3567.81	-965.07	40°06'21.778"N	104°38'56.470"W	0.00	
11217.00†	90.055	181.776	7246.60	3696.00	-3667.76	-968.17	40°06'20.790"N	104°38'56.510"W	0.00	
11317.00†	90.055	181.776	7246.50	3796.00	-3767.71	-971.27	40°06'19.802"N	104°38'56.549"W	0.00	
11417.00†	90.055	181.776	7246.41	3896.00	-3867.66	-974.37	40°06'18.813"N	104°38'56.589"W	0.00	
11517.00†	90.055	181.776	7246.31	3996.00	-3967.61	-977.47	40°06'17.825"N	104°38'56.629"W	0.00	
11617.00†	90.055	181.776	7246.22	4096.00	-4067.57	-980.57	40°06'16.837"N	104°38'56.669"W	0.00	
11717.00†	90.055	181.776	7246.12	4196.00	-4167.52	-983.67	40°06'15.849"N	104°38'56.709"W	0.00	
11817.00†	90.055	181.776	7246.03	4296.00	-4267.47	-986.77	40°06'14.861"N	104°38'56.749"W	0.00	
11917.00†	90.055	181.776	7245.93	4396.00	-4367.42	-989.87	40°06'13.873"N	104°38'56.789"W	0.00	
12017.00†	90.055	181.776	7245.83	4496.00	-4467.37	-992.97	40°06'12.885"N	104°38'56.828"W	0.00	
12117.00†	90.055	181.776	7245.74	4596.00	-4567.33	-996.07	40°06'11.897"N	104°38'56.868"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 POWERS 28C-34HZ
Area	Compass Import	Well	POWERS 28C-34HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TN)	Wellbore	POWERS 28C-34HZ PWB
Facility	2N-65W-27 Powers 27-1 Pad		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12217.00†	90.055	181.776	7245.64	4696.00	-4667.28	-999.17	40°06'10.908"N	104°38'56.908"W	0.00	
12317.00†	90.055	181.776	7245.55	4796.00	-4767.23	-1002.27	40°06'09.920"N	104°38'56.948"W	0.00	
12417.00†	90.055	181.776	7245.45	4896.00	-4867.18	-1005.37	40°06'08.932"N	104°38'56.988"W	0.00	
12517.00†	90.055	181.776	7245.36	4996.00	-4967.13	-1008.47	40°06'07.944"N	104°38'57.028"W	0.00	
12617.00†	90.055	181.776	7245.26	5096.00	-5067.09	-1011.57	40°06'06.956"N	104°38'57.067"W	0.00	
12717.00†	90.055	181.776	7245.17	5196.00	-5167.04	-1014.67	40°06'05.968"N	104°38'57.107"W	0.00	
12817.00†	90.055	181.776	7245.07	5296.00	-5266.99	-1017.77	40°06'04.980"N	104°38'57.147"W	0.00	
12889.59	90.055	181.776	7245.00 [†]	5368.59	-5339.54	-1020.02	40°06'04.262"N	104°38'57.176"W	0.00	TOTAL DEPTH

HOLE & CASING SECTIONS -

Ref Wellbore: POWERS 28C-34HZ PWB

Ref Wellpath: POWERS 28C-34HZ (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	1410.00	1393.00	17.00	1410.00	0.00	0.00	0.00	0.00
9.625in Casing Surface	17.00	1410.00	1393.00	17.00	1410.00	0.00	0.00	0.00	0.00
7.875in Open Hole	1410.00	12889.59	11479.59	1410.00	7245.00	0.00	0.00	-5339.54	-1020.02
5.5in Casing Production	17.00	12889.59	12872.59	17.00	7245.00	0.00	0.00	-5339.54	-1020.02

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
POWERS 28C-34HZ SHL		4942.00	-0.01	0.00	1739507.85	14569115.95	40°06'57.049"N	104°38'44.045"W	point
1) POWERS 28C-34HZ BHL	12889.59	7245.00	-5339.55	-1020.01	1738509.13	14563772.40	40°06'04.262"N	104°38'57.176"W	point
SEC.27-T2N-R65W SECTION LINES		7245.00	-0.01	0.00	1739507.85	14569115.95	40°06'57.049"N	104°38'44.045"W	polygon
SEC.34-T2N-R65W SECTION LINES		7245.00	-0.01	0.00	1739507.85	14569115.95	40°06'57.049"N	104°38'44.045"W	polygon

SURVEY PROGRAM - Ref Wellbore: POWERS 28C-34HZ PWB Ref Wellpath: POWERS 28C-34HZ (PERMIT REV-3) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	12889.59	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)		POWERS 28C-34HZ PWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 POWERS 28C-34HZ
Area	Compass Import	Well	POWERS 28C-34HZ
Field	WELD COUNTY (UTM (ZONE 13)/NAD83/TN)	Wellbore	POWERS 28C-34HZ PWB
Facility	2N-65W-27 Powers 27-1 Pad		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
4582.72	10.324	301.378	4540.00	SUSSEX
6543.47	10.324	301.378	6469.00	SHARON SPRINGS
7019.53	27.181	199.752	6930.00	NIOBRARA TOP
7106.20	35.439	194.645	7004.00	NIOBRARA B BENCH
7193.30	43.881	191.266	7071.00	NIOBRARA C BENCH
7465.34	70.588	184.985	7217.00	FORT HAYS
7554.10	79.347	183.492	7240.00	CODELL
7662.53	90.055	181.776	7250.00	TOP OF PRODUCTION

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	301.378	17.00	TIE-ON
1600.00	0.000	301.378	1600.00	BEGIN NUDGE
2116.22	10.324	301.378	2113.43	END NUDGE
6711.20	10.324	301.378	6634.01	KOP, BUILD @ 10°/100'
7662.53	90.055	181.776	7250.00	LANDING POINT
12889.59	90.055	181.776	7245.00	TOTAL DEPTH