



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 CREAM 37N-28HZ (423'FNL & 1375'FEL, SEC.28)
Area	COLORADO	Well	CREAM 37N-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 37N-28HZ AWB <12694>
Facility	SEC.28-T3N-R65W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Precain
Scale	0.99961	Report Generated	5/20/2015 at 9:13:23 AM
Convergence at slot	0.22° East	Database/Source file	WellArchitectAPC/CREAM_37N-28HZ_AWB__12694_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2844.13	1831.58	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W
Facility Reference Pt			1732363.88	14597810.60	40°11'40.992"N	104°40'14.664"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

## WELLPATH DATUM

Calculation method	Minimum curvature	PRECISION 462 (20'KB) (RKB) to Facility Vertical Datum	4844.00ft
Horizontal Reference Pt	Slot	PRECISION 462 (20'KB) (RKB) to Mean Sea Level	4844.00ft
Vertical Reference Pt	PRECISION 462 (20'KB) (RKB)	PRECISION 462 (20'KB) (RKB) to Mud Line at Slot (SLOT#29 CREAM 37N-28HZ (423'FNL & 1375'FEL, SEC.28))	4844.00ft
MD Reference Pt	PRECISION 462 (20'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.86°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 CREAM 37N-28HZ (423'FNL & 1375'FEL, SEC.28)
Area	COLORADO	Well	CREAM 37N-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 37N-28HZ AWB <12694>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (147 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	226.400	0.00	0.00	0.00	0.00	40°12'09.097"N	104°39'51.059"W	0.00	
20.00	0.000	226.400	20.00	0.00	0.00	0.00	40°12'09.097"N	104°39'51.059"W	0.00	Tie-On
99.00	0.600	226.400	99.00	0.29	-0.29	-0.30	40°12'09.094"N	104°39'51.063"W	0.76	Begin CATHEDRAL MWD Surveys
163.00	0.700	209.800	162.99	0.87	-0.86	-0.74	40°12'09.089"N	104°39'51.068"W	0.33	
221.00	1.000	209.200	220.99	1.62	-1.60	-1.16	40°12'09.081"N	104°39'51.074"W	0.52	
278.00	0.600	236.300	277.98	2.23	-2.20	-1.65	40°12'09.075"N	104°39'51.080"W	0.95	
335.00	0.400	299.400	334.98	2.30	-2.27	-2.07	40°12'09.075"N	104°39'51.086"W	0.97	
399.00	1.700	351.700	398.97	1.26	-1.22	-2.40	40°12'09.085"N	104°39'51.090"W	2.33	
463.00	3.000	10.000	462.92	-1.33	1.37	-2.25	40°12'09.110"N	104°39'51.088"W	2.32	
527.00	2.800	2.000	526.83	-4.55	4.58	-1.90	40°12'09.142"N	104°39'51.084"W	0.70	
591.00	3.900	9.100	590.72	-8.26	8.29	-1.51	40°12'09.179"N	104°39'51.078"W	1.83	
655.00	5.600	14.400	654.50	-13.46	13.46	-0.38	40°12'09.230"N	104°39'51.064"W	2.74	
719.00	6.800	10.800	718.13	-20.22	20.21	1.10	40°12'09.297"N	104°39'51.045"W	1.97	
783.00	7.500	6.800	781.63	-28.11	28.08	2.31	40°12'09.374"N	104°39'51.029"W	1.34	
846.00	7.100	4.800	844.12	-36.08	36.04	3.12	40°12'09.453"N	104°39'51.019"W	0.75	
910.00	8.000	6.500	907.56	-44.46	44.41	3.95	40°12'09.536"N	104°39'51.008"W	1.45	
974.00	10.500	6.300	970.73	-54.70	54.63	5.10	40°12'09.637"N	104°39'50.993"W	3.91	
1036.00	10.900	7.100	1031.65	-66.15	66.06	6.44	40°12'09.750"N	104°39'50.976"W	0.69	
1101.00	11.200	8.600	1095.44	-78.52	78.40	8.15	40°12'09.872"N	104°39'50.954"W	0.64	
1172.00	12.700	6.800	1164.90	-93.11	92.97	10.10	40°12'10.016"N	104°39'50.929"W	2.18	Tie-Into CATHEDRAL MWD Surveys
1268.00	13.220	6.810	1258.46	-114.53	114.35	12.65	40°12'10.227"N	104°39'50.896"W	0.54	Begin BHI MWD+IFR Surveys
1362.00	13.470	6.110	1349.92	-136.12	135.91	15.09	40°12'10.440"N	104°39'50.864"W	0.32	
1455.00	13.680	6.050	1440.32	-157.86	157.61	17.40	40°12'10.655"N	104°39'50.835"W	0.23	
1545.00	13.430	0.350	1527.82	-178.91	178.65	18.59	40°12'10.862"N	104°39'50.819"W	1.51	
1635.00	13.320	0.770	1615.38	-199.73	199.47	18.79	40°12'11.068"N	104°39'50.817"W	0.16	
1725.00	13.250	358.680	1702.97	-220.40	220.15	18.69	40°12'11.272"N	104°39'50.818"W	0.54	
1814.00	11.960	0.520	1789.82	-239.82	239.56	18.54	40°12'11.464"N	104°39'50.820"W	1.52	
1904.00	11.890	358.830	1877.88	-258.41	258.16	18.44	40°12'11.648"N	104°39'50.821"W	0.40	
1994.00	11.120	4.930	1966.07	-276.33	276.08	19.00	40°12'11.825"N	104°39'50.814"W	1.60	
2084.00	10.490	3.120	2054.48	-293.17	292.90	20.19	40°12'11.991"N	104°39'50.799"W	0.79	
2174.00	10.400	0.880	2142.99	-309.48	309.21	20.76	40°12'12.153"N	104°39'50.791"W	0.46	
2264.00	11.510	7.020	2231.35	-326.54	326.24	21.98	40°12'12.321"N	104°39'50.776"W	1.79	
2353.00	11.270	6.730	2318.60	-344.01	343.69	24.08	40°12'12.493"N	104°39'50.749"W	0.28	
2443.00	12.290	5.140	2406.70	-362.32	361.97	25.97	40°12'12.674"N	104°39'50.724"W	1.19	
2533.00	11.500	3.110	2494.77	-380.83	380.47	27.32	40°12'12.857"N	104°39'50.707"W	0.99	
2623.00	12.000	8.210	2582.88	-399.08	398.68	29.14	40°12'13.037"N	104°39'50.683"W	1.28	
2713.00	11.850	6.760	2670.94	-417.55	417.12	31.57	40°12'13.219"N	104°39'50.652"W	0.37	
2802.00	11.720	6.030	2758.06	-435.64	435.19	33.59	40°12'13.397"N	104°39'50.626"W	0.22	
2892.00	11.690	4.820	2846.19	-453.84	453.36	35.32	40°12'13.577"N	104°39'50.604"W	0.27	
2982.00	12.440	7.070	2934.20	-472.57	472.07	37.28	40°12'13.762"N	104°39'50.579"W	0.98	
3162.00	11.430	5.770	3110.31	-509.62	509.05	41.46	40°12'14.127"N	104°39'50.525"W	0.58	
3251.00	12.330	11.950	3197.41	-527.73	527.12	44.31	40°12'14.306"N	104°39'50.488"W	1.75	
3341.00	11.530	10.740	3285.46	-546.02	545.36	47.98	40°12'14.486"N	104°39'50.441"W	0.93	
3431.00	11.150	15.750	3373.71	-563.29	562.58	52.01	40°12'14.656"N	104°39'50.389"W	1.17	
3521.00	12.200	12.390	3461.85	-581.02	580.24	56.42	40°12'14.831"N	104°39'50.332"W	1.39	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 CREAM 37N-28HZ (423'FNL & 1375'FEL, SEC.28)
Area	COLORADO	Well	CREAM 37N-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 37N-28HZ AWB <12694>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3610.00	12.550	14.000	3548.78	-599.65	598.81	60.77	40°12'15.014"N	104°39'50.276"W	0.55	
3700.00	12.400	9.900	3636.66	-618.72	617.81	64.80	40°12'15.202"N	104°39'50.224"W	1.00	
3790.00	12.510	6.650	3724.54	-637.96	637.02	67.59	40°12'15.392"N	104°39'50.188"W	0.79	
3880.00	12.570	1.380	3812.39	-657.45	656.49	68.96	40°12'15.584"N	104°39'50.170"W	1.27	
3969.00	12.780	3.940	3899.23	-676.96	675.99	69.87	40°12'15.777"N	104°39'50.159"W	0.67	
4059.00	13.910	8.290	3986.80	-697.63	696.63	72.11	40°12'15.981"N	104°39'50.130"W	1.68	
4149.00	13.670	8.310	4074.20	-718.90	717.86	75.21	40°12'16.191"N	104°39'50.090"W	0.27	
4239.00	12.420	5.710	4161.88	-739.09	738.01	77.71	40°12'16.390"N	104°39'50.058"W	1.53	
4328.00	11.970	5.670	4248.87	-757.83	756.72	79.57	40°12'16.575"N	104°39'50.033"W	0.51	
4418.00	10.860	4.490	4337.09	-775.59	774.46	81.16	40°12'16.750"N	104°39'50.013"W	1.26	
4508.00	9.710	9.070	4425.64	-791.56	790.41	83.02	40°12'16.908"N	104°39'49.989"W	1.57	
4597.00	11.100	8.530	4513.18	-807.48	806.29	85.47	40°12'17.065"N	104°39'49.957"W	1.57	
4687.00	12.330	7.990	4601.30	-825.60	824.38	88.09	40°12'17.243"N	104°39'49.924"W	1.37	
4776.00	12.340	6.540	4688.25	-844.50	843.24	90.50	40°12'17.430"N	104°39'49.893"W	0.35	
4866.00	10.910	7.060	4776.40	-862.53	861.24	92.64	40°12'17.608"N	104°39'49.865"W	1.59	
4956.00	9.980	4.520	4864.91	-878.78	877.47	94.30	40°12'17.768"N	104°39'49.844"W	1.15	
5046.00	8.670	1.730	4953.71	-893.35	892.03	95.12	40°12'17.912"N	104°39'49.833"W	1.54	
5135.00	8.390	357.930	5041.73	-906.54	905.22	95.09	40°12'18.042"N	104°39'49.834"W	0.71	
5225.00	7.880	356.090	5130.83	-919.25	917.94	94.43	40°12'18.168"N	104°39'49.842"W	0.64	
5315.00	7.420	355.110	5220.02	-931.18	929.88	93.51	40°12'18.286"N	104°39'49.854"W	0.53	
5405.00	5.500	352.090	5309.45	-941.22	939.95	92.42	40°12'18.386"N	104°39'49.868"W	2.17	
5494.00	4.730	343.080	5398.10	-948.93	947.68	90.77	40°12'18.462"N	104°39'49.889"W	1.25	
5584.00	3.260	343.550	5487.87	-954.91	953.69	88.96	40°12'18.521"N	104°39'49.912"W	1.63	
5674.00	1.960	359.450	5577.78	-958.89	957.68	88.22	40°12'18.561"N	104°39'49.922"W	1.64	
5764.00	1.140	44.390	5667.75	-961.08	959.86	88.84	40°12'18.582"N	104°39'49.914"W	1.56	
5853.00	0.400	262.020	5756.74	-961.67	960.45	89.15	40°12'18.588"N	104°39'49.910"W	1.66	
6033.00	0.310	343.000	5936.74	-962.04	960.83	88.38	40°12'18.592"N	104°39'49.920"W	0.26	
6392.00	1.520	26.700	6295.69	-967.25	966.01	90.24	40°12'18.643"N	104°39'49.896"W	0.37	
6481.00	1.710	0.410	6384.66	-969.64	968.39	90.78	40°12'18.667"N	104°39'49.889"W	0.85	
6526.00	0.550	160.960	6429.65	-970.11	968.86	90.85	40°12'18.671"N	104°39'49.888"W	4.97	
6571.00	3.740	185.520	6474.62	-968.44	967.19	90.78	40°12'18.655"N	104°39'49.889"W	7.22	
6661.00	10.160	196.580	6563.91	-957.87	956.65	88.23	40°12'18.551"N	104°39'49.922"W	7.25	
6751.00	17.230	195.620	6651.30	-937.31	936.18	82.37	40°12'18.348"N	104°39'49.997"W	7.86	
6840.00	24.790	190.020	6734.33	-906.09	905.06	75.56	40°12'18.041"N	104°39'50.085"W	8.78	
6930.00	32.920	185.380	6813.10	-863.01	862.06	69.98	40°12'17.616"N	104°39'50.157"W	9.36	
6975.00	37.200	184.550	6849.92	-837.23	836.31	67.75	40°12'17.361"N	104°39'50.186"W	9.57	
7020.00	40.730	181.020	6884.91	-808.96	808.06	66.41	40°12'17.082"N	104°39'50.203"W	9.26	
7065.00	44.850	181.640	6917.93	-778.40	777.51	65.70	40°12'16.780"N	104°39'50.212"W	9.20	
7118.00	49.020	181.280	6954.11	-739.69	738.81	64.71	40°12'16.398"N	104°39'50.225"W	7.88	
7163.00	55.550	177.570	6981.63	-704.14	703.24	65.12	40°12'16.046"N	104°39'50.220"W	15.91	
7201.00	62.990	176.850	7001.03	-671.56	670.64	66.72	40°12'15.724"N	104°39'50.199"W	19.65	
7245.00	72.000	175.610	7017.86	-631.09	630.12	69.40	40°12'15.324"N	104°39'50.165"W	20.64	
7290.00	80.520	175.300	7028.54	-587.61	586.59	72.86	40°12'14.894"N	104°39'50.120"W	18.95	
7319.00	84.610	176.670	7032.29	-558.97	557.91	74.88	40°12'14.610"N	104°39'50.094"W	14.86	
7350.00†	85.905	177.101	7034.85	-528.15	527.06	76.55	40°12'14.305"N	104°39'50.072"W	4.40	7" Casing Point

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 CREAM 37N-28HZ (423'FNL & 1375'FEL, SEC.28)
Area	COLORADO	Well	CREAM 37N-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 37N-28HZ AWB <12694>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (147 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7420.00	88.830	178.070	7038.07	-458.34	457.20	79.50	40°12'13.615"N	104°39'50.034"W	4.40	
7511.00	90.030	178.580	7038.97	-367.44	366.25	82.16	40°12'12.716"N	104°39'50.000"W	1.43	
7601.00	90.610	178.560	7038.47	-277.51	276.28	84.40	40°12'11.827"N	104°39'49.971"W	0.64	
7690.00	90.670	179.880	7037.47	-188.56	187.30	85.62	40°12'10.948"N	104°39'49.956"W	1.48	
7825.00	91.320	179.440	7035.13	-53.61	52.32	86.42	40°12'09.614"N	104°39'49.945"W	0.58	
7960.00	91.260	180.290	7032.09	81.34	-82.64	86.74	40°12'08.280"N	104°39'49.941"W	0.63	
8050.00	90.180	180.640	7030.96	171.33	-172.63	86.00	40°12'07.391"N	104°39'49.951"W	1.26	
8139.00	90.890	181.180	7030.13	260.32	-261.62	84.59	40°12'06.512"N	104°39'49.969"W	1.00	
8229.00	91.350	180.710	7028.37	350.30	-351.59	83.11	40°12'05.623"N	104°39'49.988"W	0.73	
8319.00	89.810	181.070	7027.46	440.30	-441.57	81.71	40°12'04.733"N	104°39'50.006"W	1.76	
8499.00	89.780	180.500	7028.10	620.29	-621.55	79.24	40°12'02.955"N	104°39'50.038"W	0.32	
8588.00	89.870	179.980	7028.37	709.29	-710.55	78.87	40°12'02.075"N	104°39'50.043"W	0.59	
8678.00	89.870	181.280	7028.58	799.29	-800.54	77.88	40°12'01.186"N	104°39'50.055"W	1.44	
8768.00	90.060	181.120	7028.63	889.28	-890.52	76.00	40°12'00.297"N	104°39'50.080"W	0.28	
8858.00	90.670	181.060	7028.06	979.28	-980.50	74.28	40°11'59.408"N	104°39'50.102"W	0.68	
8948.00	91.530	180.630	7026.33	1069.26	-1070.48	72.96	40°11'58.519"N	104°39'50.119"W	1.07	
9038.00	91.410	181.420	7024.02	1159.23	-1160.43	71.35	40°11'57.630"N	104°39'50.140"W	0.89	
9127.00	90.640	180.310	7022.43	1248.22	-1249.40	70.00	40°11'56.750"N	104°39'50.157"W	1.52	
9217.00	89.810	179.430	7022.08	1338.20	-1339.40	70.21	40°11'55.861"N	104°39'50.154"W	1.34	
9307.00	89.780	181.610	7022.40	1428.19	-1429.39	69.39	40°11'54.972"N	104°39'50.165"W	2.42	
9397.00	90.240	181.140	7022.38	1518.19	-1519.37	67.23	40°11'54.083"N	104°39'50.193"W	0.73	
9486.00	90.760	180.730	7021.61	1607.18	-1608.35	65.78	40°11'53.203"N	104°39'50.211"W	0.74	
9576.00	90.490	180.940	7020.63	1697.18	-1698.33	64.47	40°11'52.314"N	104°39'50.228"W	0.38	
9666.00	90.030	181.880	7020.22	1787.17	-1788.31	62.25	40°11'51.425"N	104°39'50.257"W	1.16	
9756.00	90.700	181.290	7019.64	1877.16	-1878.27	59.76	40°11'50.536"N	104°39'50.289"W	0.99	
9846.00	90.930	181.580	7018.36	1967.15	-1968.23	57.51	40°11'49.647"N	104°39'50.318"W	0.41	
9935.00	90.800	183.240	7017.02	2056.10	-2057.14	53.77	40°11'48.768"N	104°39'50.366"W	1.87	
10025.00	90.270	182.650	7016.18	2146.04	-2147.02	49.15	40°11'47.880"N	104°39'50.426"W	0.88	
10115.00	90.090	182.040	7015.90	2236.01	-2236.94	45.46	40°11'46.992"N	104°39'50.473"W	0.71	
10295.00	89.780	180.420	7016.10	2416.00	-2416.89	41.60	40°11'45.213"N	104°39'50.523"W	0.92	
10384.00	89.720	179.970	7016.49	2504.99	-2505.89	41.30	40°11'44.334"N	104°39'50.527"W	0.51	
10474.00	90.240	181.630	7016.52	2594.99	-2595.88	40.04	40°11'43.445"N	104°39'50.543"W	1.93	
10564.00	89.750	181.730	7016.53	2684.98	-2685.84	37.40	40°11'42.556"N	104°39'50.577"W	0.56	
10654.00	90.060	181.470	7016.68	2774.97	-2775.80	34.89	40°11'41.667"N	104°39'50.609"W	0.45	
10744.00	90.000	181.090	7016.63	2864.97	-2865.78	32.88	40°11'40.777"N	104°39'50.635"W	0.43	
10833.00	89.290	181.380	7017.18	2953.96	-2954.76	30.96	40°11'39.898"N	104°39'50.660"W	0.86	
10923.00	89.750	181.310	7017.94	3043.96	-3044.73	28.85	40°11'39.009"N	104°39'50.687"W	0.52	
11013.00	89.930	180.990	7018.19	3133.95	-3134.71	27.04	40°11'38.120"N	104°39'50.711"W	0.41	
11103.00	90.180	180.340	7018.10	3223.95	-3224.70	26.00	40°11'37.231"N	104°39'50.724"W	0.77	
11192.00	89.530	180.140	7018.33	3312.95	-3313.70	25.62	40°11'36.351"N	104°39'50.729"W	0.76	
11282.00	89.960	179.780	7018.73	3402.93	-3403.70	25.69	40°11'35.462"N	104°39'50.728"W	0.62	
11372.00	88.610	180.150	7019.85	3492.91	-3493.69	25.74	40°11'34.572"N	104°39'50.727"W	1.56	
11462.00	89.160	179.510	7021.60	3582.88	-3583.67	26.01	40°11'33.683"N	104°39'50.724"W	0.94	
11552.00	88.760	180.550	7023.24	3672.86	-3673.66	25.96	40°11'32.794"N	104°39'50.724"W	1.24	
11642.00	88.670	181.540	7025.25	3762.83	-3763.62	24.32	40°11'31.905"N	104°39'50.746"W	1.10	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 CREAM 37N-28HZ (423'FNL & 1375'FEL, SEC.28)
Area	COLORADO	Well	CREAM 37N-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 37N-28HZ AWB <12694>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (147 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11731.00	89.040	181.930	7027.03	3851.80	-3852.56	21.63	40°11'31.026"N	104°39'50.780"W	0.60	
11821.00	88.610	180.680	7028.88	3941.78	-3942.52	19.58	40°11'30.137"N	104°39'50.807"W	1.47	
11911.00	89.380	181.620	7030.46	4031.76	-4032.48	17.77	40°11'29.248"N	104°39'50.830"W	1.35	
12001.00	88.760	181.890	7031.92	4121.74	-4122.43	15.02	40°11'28.359"N	104°39'50.865"W	0.75	
12091.00	89.380	182.130	7033.38	4211.71	-4212.36	11.86	40°11'27.471"N	104°39'50.906"W	0.74	
12181.00	91.100	181.880	7033.00	4301.69	-4302.30	8.71	40°11'26.582"N	104°39'50.947"W	1.93	
12270.00	91.500	181.680	7030.98	4390.65	-4391.23	5.95	40°11'25.703"N	104°39'50.982"W	0.50	
12360.00	91.070	181.710	7028.96	4480.62	-4481.17	3.28	40°11'24.814"N	104°39'51.017"W	0.48	
12450.00	89.930	180.720	7028.18	4570.61	-4571.15	1.38	40°11'23.925"N	104°39'51.041"W	1.68	
12540.00	90.000	180.390	7028.23	4660.61	-4661.14	0.51	40°11'23.036"N	104°39'51.052"W	0.37	
12641.00	90.090	180.280	7028.15	4761.61	-4762.14	-0.09	40°11'22.038"N	104°39'51.060"W	0.14	Last BHI MWD+IFR Surveys
12694.00	90.090	180.280	7028.07	4814.60	-4815.14	-0.34	40°11'21.514"N	104°39'51.063"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: CREAM 37N-28HZ AWB <12694> Ref Wellpath: CREAM 37N-28HZ AWP										
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	20.00	1207.00	1187.00	20.00	1199.03	0.00	0.00	100.67	11.02	
9.625in Casing Surface	20.00	1217.00	1197.00	20.00	1208.78	0.00	0.00	102.89	11.28	
8.75in Open Hole	1217.00	7360.00	6143.00	1208.78	7035.53	102.89	11.28	517.10	77.05	
7in Casing Intermediate	20.00	7350.00	7330.00	20.00	7034.85	0.00	0.00	527.06	76.55	
6.125in Open Hole	7360.00	12694.00	5334.00	7035.53	7028.07	517.10	77.05	-4815.14	-0.34	

TARGETS									
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
SEC.21-T3N-R65W LINES	0.00	0.00	0.00	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon	
SEC.28-T3N-R65W LINES	0.00	0.00	0.00	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon	
CREAM 37N-28HZ (50'FSL & 1399'FEL, SEC.28) REV-1	7019.00	-4816.74	-2.50	1734199.89	14595845.56	40°11'21.498"N	104°39'51.091"W	point	
CREAM 37N-28HZ LAND BOX	7019.00	0.00	0.00	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon	

WELLPATH COMPOSITION - Ref Wellbore: CREAM 37N-28HZ AWB <12694> Ref Wellpath: CREAM 37N-28HZ AWP									
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment		Wellbore		
20.00	1172.00	Custom APC_ISCWSA REV 2 MWD			CATHEDRAL ENERGY MWD SURVEYS <99-1172>		CREAM 37N-28HZ AWB <12694>		
1172.00	7319.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)			BHI MWD+IFR SURVEYS 8 3/4" HOLE <1268-7319>		CREAM 37N-28HZ AWB <12694>		
7319.00	12641.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)			BHI MWD+IFR SURVEYS 6 1/8" HOLE <7420-12641>		CREAM 37N-28HZ AWB <12694>		
12641.00	12694.00	Blind Drilling (std)			Projection to bit		CREAM 37N-28HZ AWB <12694>		

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#29 CREAM 37N-28HZ (423'FNL & 1375'FEL, SEC.28)
Area	COLORADO	Well	CREAM 37N-28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 37N-28HZ AWB <12694>
Facility	SEC.28-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
20.00	0.000	226.400	20.00	Tie-On
99.00	0.600	226.400	99.00	Begin CATHEDRAL MWD Surveys
1172.00	12.700	6.800	1164.90	Tie-Into CATHEDRAL MWD Surveys
1268.00	13.220	6.810	1258.46	Begin BHI MWD+IFR Surveys
7350.00	85.905	177.101	7034.85	7" Casing Point
12641.00	90.090	180.280	7028.15	Last BHI MWD+IFR Surveys
12694.00	90.090	180.280	7028.07	Projection to Bit