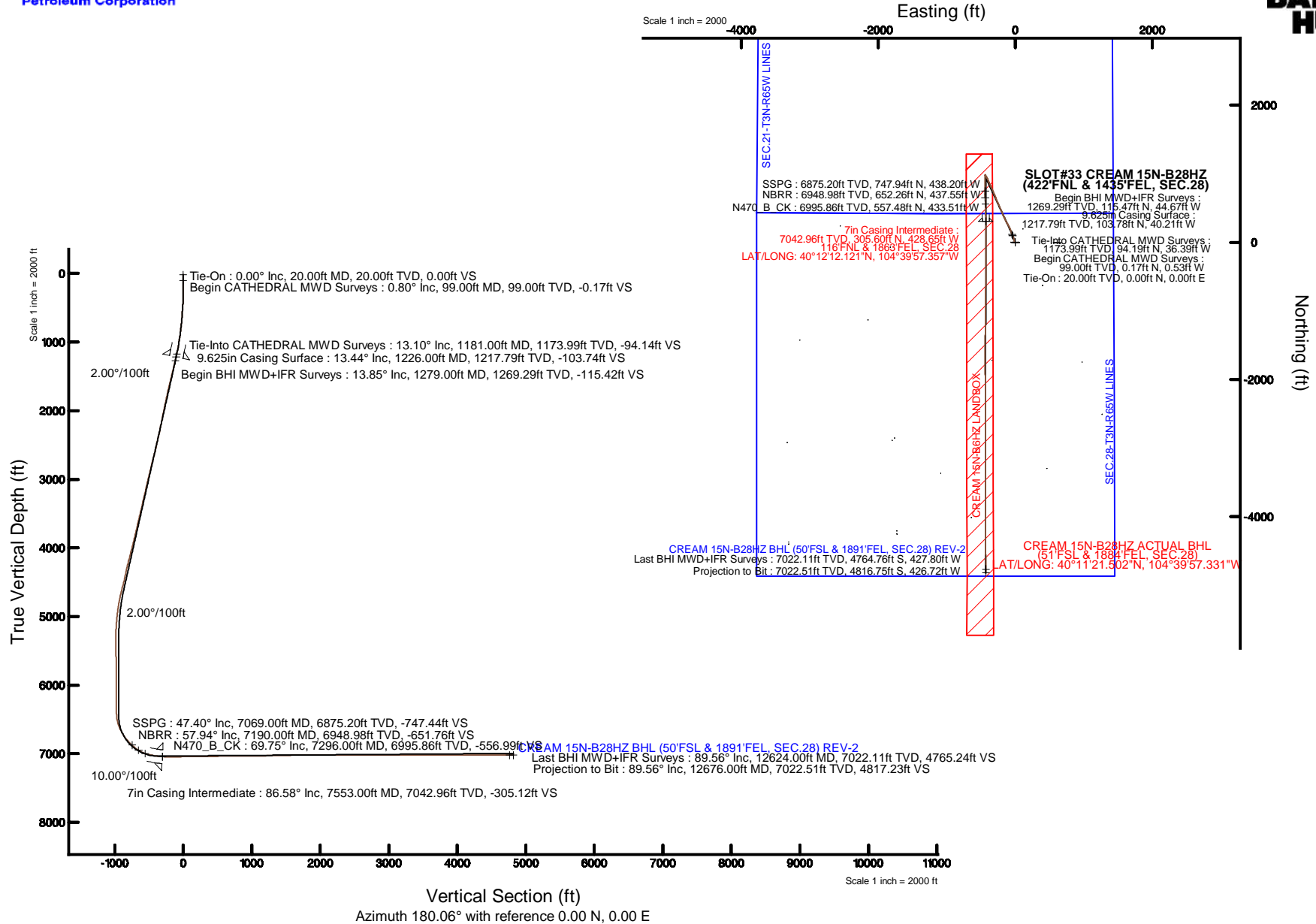


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#33 CREAM 15N-B28HZ (422°FNL & 1435°FEL, SEC.28)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: CREAM 15N-B28HZ
 Facility: SEC.28-T3N-R65W Wellbore: CREAM 15N-B28HZ PWB

Plot reference wellpath is CREAM 15N-B28HZ (REV-A.0) PWP

True vertical depths are referenced to PRECISION 462 (20°KB) (RKB)	Grid System: NAD83 / UTM Zone 13 North, US feet
Measured depths are referenced to PRECISION 462 (20°KB) (RKB)	North Reference: True north
PRECISION 462 (20°KB) (RKB) to Mean Sea Level: 4844 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#33 CREAM 15N-B28HZ (422°FNL & 1435°FEL, SEC.28)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 6/12/2015



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 CREAM 15N-B28HZ (422'FNL & 1435'FEL, SEC.28)
Area	COLORADO	Well	CREAM 15N-B28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 15N-B28HZ AWB <12676>
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	6/12/2015 at 10:16:58 AM
Convergence at slot	0.22° East	Database/Source file	WellArchitectAPC/CREAM_15N-B28HZ_AWB__12676_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2844.53	1771.52	1734124.14	14600660.57	40°12'09.101"N	104°39'51.833"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#33 CREAM 15N-B28HZ (422'FNL & 1435'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	180.06°

REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	CREAM 15N-B28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 15N-B28HZ AWB <12676>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (148 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	287.700	0.00	0.00	0.00	0.00	40°12'09.101"N	104°39'51.833"W	0.00	
20.00	0.000	287.700	20.00	0.00	0.00	0.00	40°12'09.101"N	104°39'51.833"W	0.00	Tie-On
99.00	0.800	287.700	99.00	-0.17	0.17	-0.53	40°12'09.103"N	104°39'51.840"W	1.01	Begin CATHEDRAL MWD Surveys
163.00	0.900	246.300	162.99	-0.10	0.10	-1.41	40°12'09.102"N	104°39'51.851"W	0.95	
221.00	0.600	273.100	220.99	0.07	-0.07	-2.13	40°12'09.100"N	104°39'51.860"W	0.78	
278.00	1.000	278.400	277.98	-0.02	0.02	-2.92	40°12'09.101"N	104°39'51.871"W	0.71	
335.00	1.600	312.700	334.97	-0.63	0.64	-4.00	40°12'09.107"N	104°39'51.885"W	1.68	
399.00	2.900	324.700	398.92	-2.56	2.56	-5.59	40°12'09.126"N	104°39'51.905"W	2.15	
463.00	3.900	337.100	462.80	-5.88	5.89	-7.37	40°12'09.159"N	104°39'51.928"W	1.93	
527.00	4.000	343.800	526.65	-10.03	10.04	-8.84	40°12'09.200"N	104°39'51.947"W	0.74	
591.00	4.600	338.800	590.47	-14.56	14.57	-10.39	40°12'09.245"N	104°39'51.967"W	1.10	
655.00	5.200	340.500	654.24	-19.69	19.70	-12.29	40°12'09.296"N	104°39'51.991"W	0.96	
719.00	6.100	345.800	717.93	-25.72	25.73	-14.09	40°12'09.355"N	104°39'52.015"W	1.62	
783.00	6.700	345.800	781.53	-32.63	32.65	-15.84	40°12'09.424"N	104°39'52.037"W	0.94	
842.00	7.400	345.100	840.08	-39.64	39.66	-17.66	40°12'09.493"N	104°39'52.061"W	1.20	
974.00	8.900	342.400	970.74	-57.58	57.60	-22.94	40°12'09.670"N	104°39'52.129"W	1.17	
1036.00	10.000	340.400	1031.90	-67.22	67.25	-26.19	40°12'09.766"N	104°39'52.171"W	1.85	
1101.00	11.100	339.200	1095.80	-78.38	78.41	-30.31	40°12'09.876"N	104°39'52.224"W	1.73	
1165.00	12.900	338.900	1158.40	-90.80	90.84	-35.07	40°12'09.999"N	104°39'52.285"W	2.81	
1181.00	13.100	337.900	1173.99	-94.14	94.19	-36.39	40°12'10.032"N	104°39'52.302"W	1.88	Tie-Into CATHEDRAL MWD Surveys
1279.00	13.850	339.570	1269.29	-115.42	115.47	-44.67	40°12'10.242"N	104°39'52.409"W	0.86	Begin BHI MWD+IFR Surveys
1372.00	14.370	340.020	1359.49	-136.69	136.74	-52.50	40°12'10.452"N	104°39'52.510"W	0.57	
1465.00	14.640	340.470	1449.52	-158.60	158.67	-60.37	40°12'10.669"N	104°39'52.611"W	0.31	
1559.00	14.840	340.230	1540.43	-181.11	181.19	-68.41	40°12'10.892"N	104°39'52.715"W	0.22	
1652.00	14.650	336.890	1630.37	-203.13	203.22	-77.05	40°12'11.109"N	104°39'52.826"W	0.94	
1745.00	14.090	333.060	1720.46	-224.03	224.12	-86.80	40°12'11.316"N	104°39'52.952"W	1.19	
1839.00	14.140	331.000	1811.62	-244.26	244.37	-97.55	40°12'11.516"N	104°39'53.090"W	0.54	
1932.00	13.930	329.150	1901.85	-263.79	263.91	-108.80	40°12'11.709"N	104°39'53.235"W	0.53	
2025.00	13.360	328.000	1992.22	-282.50	282.64	-120.23	40°12'11.894"N	104°39'53.383"W	0.68	
2119.00	12.820	330.240	2083.78	-300.75	300.90	-131.16	40°12'12.074"N	104°39'53.523"W	0.79	
2212.00	12.250	334.220	2174.56	-318.58	318.74	-140.58	40°12'12.251"N	104°39'53.645"W	1.11	
2305.00	13.140	334.980	2265.29	-337.04	337.20	-149.34	40°12'12.433"N	104°39'53.758"W	0.97	
2399.00	13.710	336.690	2356.72	-356.94	357.12	-158.27	40°12'12.630"N	104°39'53.873"W	0.74	
2492.00	14.750	337.860	2446.87	-378.02	378.21	-167.09	40°12'12.838"N	104°39'53.986"W	1.16	
2585.00	13.930	335.650	2536.97	-399.17	399.37	-176.17	40°12'13.048"N	104°39'54.103"W	1.06	
2678.00	15.280	337.770	2626.96	-420.70	420.91	-185.42	40°12'13.260"N	104°39'54.223"W	1.56	
2771.00	14.940	337.270	2716.75	-443.09	443.31	-194.69	40°12'13.482"N	104°39'54.342"W	0.39	
2864.00	15.160	336.890	2806.56	-465.32	465.56	-204.09	40°12'13.702"N	104°39'54.463"W	0.26	
2954.00	14.920	336.680	2893.47	-486.78	487.02	-213.30	40°12'13.914"N	104°39'54.582"W	0.27	
3044.00	14.710	336.090	2980.48	-507.85	508.11	-222.51	40°12'14.122"N	104°39'54.701"W	0.29	
3134.00	14.530	335.810	3067.57	-528.59	528.85	-231.77	40°12'14.327"N	104°39'54.820"W	0.21	
3223.00	13.340	334.800	3153.95	-548.05	548.32	-240.72	40°12'14.520"N	104°39'54.935"W	1.36	
3313.00	14.970	336.300	3241.21	-568.08	568.36	-249.81	40°12'14.718"N	104°39'55.053"W	1.86	
3403.00	13.380	335.360	3328.47	-588.18	588.47	-258.83	40°12'14.916"N	104°39'55.169"W	1.79	
3493.00	14.170	337.350	3415.88	-607.80	608.11	-267.41	40°12'15.110"N	104°39'55.279"W	1.02	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 CREAM 15N-B28HZ (422'FNL & 1435'FEL, SEC.28)
Area	COLORADO	Well	CREAM 15N-B28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 15N-B28HZ AWP <12676>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3581.00	15.480	339.940	3500.95	-628.77	629.08	-275.59	40°12'15.318"N	104°39'55.385"W	1.67	
3671.00	14.070	338.420	3587.97	-650.21	650.54	-283.73	40°12'15.530"N	104°39'55.490"W	1.62	
3761.00	12.730	338.420	3675.52	-669.60	669.93	-291.40	40°12'15.721"N	104°39'55.589"W	1.49	
3850.00	14.050	336.630	3762.10	-688.63	688.97	-299.29	40°12'15.909"N	104°39'55.690"W	1.55	
3940.00	15.170	337.940	3849.19	-709.56	709.91	-308.05	40°12'16.116"N	104°39'55.803"W	1.30	
4030.00	14.640	337.490	3936.16	-730.97	731.33	-316.83	40°12'16.328"N	104°39'55.916"W	0.60	
4120.00	16.350	335.500	4022.89	-753.00	753.37	-326.44	40°12'16.546"N	104°39'56.040"W	1.99	
4210.00	16.320	335.060	4109.25	-775.98	776.36	-337.02	40°12'16.773"N	104°39'56.177"W	0.14	
4300.00	15.310	335.270	4195.84	-798.22	798.62	-347.32	40°12'16.993"N	104°39'56.309"W	1.12	
4390.00	14.720	334.660	4282.77	-819.34	819.74	-357.19	40°12'17.202"N	104°39'56.437"W	0.68	
4480.00	13.880	334.010	4369.98	-839.37	839.78	-366.81	40°12'17.400"N	104°39'56.561"W	0.95	
4569.00	13.880	336.110	4456.38	-858.71	859.14	-375.82	40°12'17.591"N	104°39'56.677"W	0.57	
4659.00	15.240	338.220	4543.49	-879.56	879.99	-384.58	40°12'17.797"N	104°39'56.790"W	1.62	
4749.00	15.110	337.970	4630.35	-901.41	901.85	-393.37	40°12'18.013"N	104°39'56.903"W	0.16	
4838.00	13.220	333.950	4716.65	-921.29	921.75	-402.19	40°12'18.210"N	104°39'57.016"W	2.39	
4929.00	11.170	335.040	4805.59	-938.63	939.09	-410.48	40°12'18.381"N	104°39'57.123"W	2.27	
5019.00	9.060	329.550	4894.19	-952.63	953.11	-417.75	40°12'18.520"N	104°39'57.217"W	2.58	
5108.00	7.280	329.630	4982.28	-963.53	964.01	-424.15	40°12'18.627"N	104°39'57.300"W	2.00	
5198.00	5.640	332.310	5071.71	-972.36	972.85	-429.09	40°12'18.715"N	104°39'57.363"W	1.85	
5288.00	3.800	329.280	5161.40	-978.84	979.33	-432.67	40°12'18.779"N	104°39'57.409"W	2.06	
5377.00	2.290	333.560	5250.27	-982.96	983.46	-434.97	40°12'18.819"N	104°39'57.439"W	1.71	
5467.00	1.230	293.220	5340.23	-984.95	985.45	-436.65	40°12'18.839"N	104°39'57.461"W	1.74	
5557.00	1.430	215.440	5430.21	-984.42	984.91	-438.19	40°12'18.834"N	104°39'57.481"W	1.86	
5647.00	1.680	171.870	5520.18	-982.20	982.69	-438.66	40°12'18.812"N	104°39'57.487"W	1.31	
5737.00	1.690	173.750	5610.14	-979.57	980.07	-438.33	40°12'18.786"N	104°39'57.482"W	0.06	
5916.00	0.590	149.590	5789.10	-976.15	976.65	-437.57	40°12'18.752"N	104°39'57.473"W	0.66	
6186.00	0.090	60.950	6059.10	-975.06	975.55	-436.68	40°12'18.741"N	104°39'57.461"W	0.22	
6275.00	0.410	7.140	6148.10	-975.41	975.90	-436.58	40°12'18.745"N	104°39'57.460"W	0.41	
6365.00	0.660	202.510	6238.10	-975.25	975.74	-436.74	40°12'18.743"N	104°39'57.462"W	1.18	
6500.00	0.550	220.730	6373.09	-974.04	974.53	-437.46	40°12'18.731"N	104°39'57.471"W	0.16	
6545.00	1.090	189.490	6418.08	-973.45	973.95	-437.67	40°12'18.725"N	104°39'57.474"W	1.52	
6589.00	5.870	183.010	6461.99	-970.79	971.29	-437.86	40°12'18.699"N	104°39'57.476"W	10.88	
6634.00	10.360	181.780	6506.53	-964.44	964.94	-438.11	40°12'18.636"N	104°39'57.479"W	9.98	
6724.00	21.280	182.000	6592.99	-939.96	940.46	-438.93	40°12'18.395"N	104°39'57.490"W	12.13	
6814.00	27.070	178.470	6675.06	-903.13	903.63	-438.95	40°12'18.031"N	104°39'57.490"W	6.63	
6904.00	34.800	179.930	6752.20	-856.91	857.41	-438.38	40°12'17.574"N	104°39'57.483"W	8.63	
6994.00	42.810	179.750	6822.28	-800.56	801.05	-438.21	40°12'17.017"N	104°39'57.481"W	8.90	
7069.00†	47.403	180.211	6875.20	-747.44	747.94	-438.20	40°12'16.492"N	104°39'57.481"W	6.14	SSPG
7083.00	48.260	180.290	6884.60	-737.06	737.56	-438.25	40°12'16.390"N	104°39'57.481"W	6.14	
7173.00	56.120	179.100	6939.73	-666.02	666.52	-437.83	40°12'15.687"N	104°39'57.476"W	8.80	
7190.00†	57.943	178.639	6948.98	-651.76	652.26	-437.55	40°12'15.547"N	104°39'57.472"W	10.97	NBRR
7263.00	65.790	176.840	6983.38	-587.49	587.99	-434.97	40°12'14.911"N	104°39'57.439"W	10.97	
7296.00†	69.754	177.646	6995.86	-556.99	557.48	-433.51	40°12'14.610"N	104°39'57.420"W	12.22	N470_B_CK
7353.00	76.610	178.950	7012.34	-502.49	502.98	-431.90	40°12'14.071"N	104°39'57.399"W	12.22	
7397.00	79.040	179.300	7021.62	-459.48	459.97	-431.24	40°12'13.646"N	104°39'57.391"W	5.58	

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Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 15N-B28HZ AWP <12676>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station										
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7442.00	79.790	179.340	7029.89	-415.25	415.74	-430.72	40°12'13.209"N	104°39'57.384"W	1.67	
7487.00	82.480	178.800	7036.82	-370.80	371.29	-430.00	40°12'12.770"N	104°39'57.375"W	6.09	
7515.00	84.480	178.690	7040.00	-342.99	343.48	-429.39	40°12'12.495"N	104°39'57.367"W	7.15	
7553.00†	86.581	179.079	7042.96	-305.12	305.60	-428.65	40°12'12.121"N	104°39'57.357"W	5.62	7" Casing Point
7617.00	90.120	179.730	7044.81	-241.16	241.65	-427.98	40°12'11.489"N	104°39'57.349"W	5.62	
7707.00	89.930	179.450	7044.77	-151.16	151.65	-427.34	40°12'10.600"N	104°39'57.340"W	0.38	
7797.00	90.890	179.920	7044.12	-61.17	61.65	-426.84	40°12'09.710"N	104°39'57.334"W	1.19	
7887.00	90.800	179.600	7042.80	28.82	-28.34	-426.47	40°12'08.821"N	104°39'57.329"W	0.37	
7977.00	90.670	180.520	7041.64	118.81	-118.33	-426.56	40°12'07.932"N	104°39'57.330"W	1.03	
8066.00	90.860	180.120	7040.45	207.80	-207.32	-427.06	40°12'07.052"N	104°39'57.337"W	0.50	
8155.00	90.800	179.950	7039.16	296.79	-296.31	-427.11	40°12'06.173"N	104°39'57.337"W	0.20	
8244.00	90.730	180.500	7037.98	385.78	-385.30	-427.46	40°12'05.293"N	104°39'57.342"W	0.62	
8334.00	90.520	179.900	7036.99	475.78	-475.29	-427.78	40°12'04.404"N	104°39'57.346"W	0.71	
8424.00	90.980	181.020	7035.82	565.77	-565.28	-428.50	40°12'03.515"N	104°39'57.355"W	1.35	
8514.00	90.950	181.200	7034.30	655.74	-655.25	-430.24	40°12'02.626"N	104°39'57.378"W	0.20	
8604.00	90.700	180.760	7033.00	745.72	-745.23	-431.78	40°12'01.737"N	104°39'57.398"W	0.56	
8783.00	90.430	180.530	7031.24	924.70	-924.21	-433.80	40°11'59.968"N	104°39'57.423"W	0.20	
8873.00	90.430	180.590	7030.56	1014.69	-1014.20	-434.68	40°11'59.079"N	104°39'57.435"W	0.07	
9053.00	90.200	180.540	7029.57	1194.68	-1194.19	-436.45	40°11'57.300"N	104°39'57.458"W	0.13	
9143.00	89.870	180.090	7029.52	1284.68	-1284.19	-436.95	40°11'56.411"N	104°39'57.464"W	0.62	
9232.00	91.190	180.560	7028.70	1373.68	-1373.18	-437.45	40°11'55.531"N	104°39'57.470"W	1.57	
9322.00	91.910	180.750	7026.26	1463.64	-1463.14	-438.48	40°11'54.642"N	104°39'57.484"W	0.83	
9412.00	91.910	180.600	7023.26	1553.58	-1553.09	-439.54	40°11'53.753"N	104°39'57.497"W	0.17	
9502.00	91.630	180.290	7020.48	1643.54	-1643.04	-440.24	40°11'52.864"N	104°39'57.506"W	0.46	
9592.00	90.240	179.520	7019.01	1733.52	-1733.02	-440.09	40°11'51.975"N	104°39'57.504"W	1.77	
9681.00	89.900	179.130	7018.90	1822.52	-1822.02	-439.04	40°11'51.096"N	104°39'57.491"W	0.58	
9771.00	90.610	179.140	7018.50	1912.50	-1912.01	-437.68	40°11'50.207"N	104°39'57.473"W	0.79	
9861.00	90.210	178.920	7017.86	2002.48	-2001.99	-436.16	40°11'49.317"N	104°39'57.454"W	0.51	
9951.00	89.900	179.290	7017.77	2092.47	-2091.98	-434.75	40°11'48.428"N	104°39'57.436"W	0.54	
10041.00	89.560	179.580	7018.20	2182.46	-2181.97	-433.86	40°11'47.539"N	104°39'57.424"W	0.50	
10130.00	88.980	179.990	7019.33	2271.46	-2270.97	-433.53	40°11'46.659"N	104°39'57.420"W	0.80	
10220.00	89.810	180.340	7020.28	2361.45	-2360.96	-433.79	40°11'45.770"N	104°39'57.423"W	1.00	
10310.00	90.830	180.650	7019.78	2451.44	-2450.95	-434.57	40°11'44.881"N	104°39'57.433"W	1.18	
10400.00	91.380	180.400	7018.04	2541.42	-2540.93	-435.39	40°11'43.992"N	104°39'57.444"W	0.67	
10489.00	89.380	179.670	7017.45	2630.42	-2629.93	-435.45	40°11'43.112"N	104°39'57.444"W	2.39	
10579.00	90.270	180.050	7017.73	2720.42	-2719.92	-435.23	40°11'42.223"N	104°39'57.441"W	1.08	
10669.00	88.820	179.600	7018.44	2810.41	-2809.92	-434.95	40°11'41.333"N	104°39'57.438"W	1.69	
10759.00	89.560	179.630	7019.71	2900.40	-2899.91	-434.35	40°11'40.444"N	104°39'57.430"W	0.82	
10849.00	90.640	179.850	7019.56	2990.39	-2989.90	-433.94	40°11'39.555"N	104°39'57.425"W	1.22	
10939.00	89.530	180.570	7019.42	3080.39	-3079.90	-434.27	40°11'38.665"N	104°39'57.429"W	1.47	
11028.00	89.260	180.210	7020.36	3169.38	-3168.89	-434.87	40°11'37.786"N	104°39'57.437"W	0.51	
11118.00	88.980	180.080	7021.75	3259.37	-3258.88	-435.10	40°11'36.897"N	104°39'57.440"W	0.34	
11208.00	90.180	180.090	7022.41	3349.37	-3348.88	-435.24	40°11'36.007"N	104°39'57.441"W	1.33	
11297.00	91.040	180.100	7021.46	3438.36	-3437.87	-435.38	40°11'35.128"N	104°39'57.443"W	0.97	
11387.00	89.660	180.240	7020.91	3528.36	-3527.87	-435.65	40°11'34.239"N	104°39'57.447"W	1.54	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 CREAM 15N-B28HZ (422'FNL & 1435'FEL, SEC.28)
Area	COLORADO	Well	CREAM 15N-B28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 15N-B28HZ AWB <12676>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (148 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11477.00	90.730	179.450	7020.60	3618.36	-3617.87	-435.41	40°11'33.349"N	104°39'57.444"W	1.48	
11567.00	90.920	179.090	7019.31	3708.34	-3707.85	-434.26	40°11'32.460"N	104°39'57.429"W	0.45	
11656.00	91.130	179.840	7017.71	3797.32	-3796.83	-433.43	40°11'31.581"N	104°39'57.418"W	0.87	
11746.00	90.860	179.790	7016.15	3887.30	-3886.82	-433.14	40°11'30.692"N	104°39'57.414"W	0.31	
11836.00	89.320	179.670	7016.01	3977.30	-3976.81	-432.71	40°11'29.802"N	104°39'57.409"W	1.72	
11926.00	89.560	180.360	7016.89	4067.30	-4066.81	-432.74	40°11'28.913"N	104°39'57.409"W	0.81	
12015.00	89.690	180.030	7017.47	4156.29	-4155.80	-433.04	40°11'28.033"N	104°39'57.413"W	0.40	
12105.00	89.470	179.520	7018.13	4246.29	-4245.80	-432.69	40°11'27.144"N	104°39'57.408"W	0.62	
12195.00	89.500	179.570	7018.94	4336.28	-4335.79	-431.97	40°11'26.255"N	104°39'57.399"W	0.06	
12375.00	89.630	179.560	7020.31	4516.27	-4515.78	-430.61	40°11'24.476"N	104°39'57.382"W	0.07	
12554.00	89.560	179.360	7021.57	4695.25	-4694.77	-428.92	40°11'22.707"N	104°39'57.360"W	0.12	
12624.00	89.560	178.810	7022.11	4765.24	-4764.76	-427.80	40°11'22.016"N	104°39'57.345"W	0.79	Last BHI MWD+IFR Surveys
12676.00	89.560	178.810	7022.51	4817.23	-4816.75	-426.72	40°11'21.502"N	104°39'57.331"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: CREAM 15N-B28HZ AWB <12676> Ref Wellpath: CREAM 15N-B28HZ 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	1236.00	1216.00	20.00	1227.51	0.00	0.00	105.96	-41.06
9.625in Casing Surface	20.00	1226.00	1206.00	20.00	1217.79	0.00	0.00	103.78	-40.21
8.75in Open Hole	1236.00	7563.00	6327.00	1227.51	7043.51	105.96	-41.06	295.62	-428.50
7in Casing Intermediate	20.00	7553.00	7533.00	20.00	7042.96	0.00	0.00	305.60	-428.65
6.125in Open Hole	7563.00	12676.00	5113.00	7043.51	7022.51	295.62	-428.50	-4816.75	-426.72

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	-0.40	60.06	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon
SEC.28-T3N-R65W LINES	0.00	-0.40	60.06	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon
CREAM 15N-B6HZ LANDBOX	6944.00	0.00	0.00	1734124.14	14600660.57	40°12'09.101"N	104°39'51.833"W	polygon
CREAM 15N-B28HZ BHL (50'FSL & 1891'FEL, SEC.28) REV-2	6996.00	-4817.15	-434.44	1733708.08	14595843.70	40°11'21.498"N	104°39'57.431"W	point
CREAM 15N-B28HZ BHL ON PLAT (50'FSL & 1834'FEL, SEC.28) REV-1	6996.00	-4817.15	-377.44	1733765.06	14595843.92	40°11'21.498"N	104°39'56.696"W	point

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 CREAM 15N-B28HZ (422'FNL & 1435'FEL, SEC.28)
Area	COLORADO	Well	CREAM 15N-B28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 15N-B28HZ AWB <12676>
Facility	SEC.28-T3N-R65W		

WELLPATH COMPOSITION -Ref Wellbore: CREAM 15N-B28HZ AWB <12676> Ref Wellpath: CREAM 15N-B28HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
20.00	1181.00	Custom APC_ISCWSA REV 2 MWD	CATHEDRAL ENERGY MWD SURVEYS <99-1181>	CREAM 15N-B28HZ AWB <12676>
1181.00	7515.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1279-7515>	CREAM 15N-B28HZ AWB <12676>
7515.00	12624.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7617-12624>	CREAM 15N-B28HZ AWB <12676>
12624.00	12676.00	Blind Drilling (std)	Projection to bit	CREAM 15N-B28HZ AWB <12676>

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 CREAM 15N-B28HZ (422'FNL & 1435'FEL, SEC.28)
Area	COLORADO	Well	CREAM 15N-B28HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM 15N-B28HZ AWB <12676>
Facility	SEC.28-T3N-R65W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
20.00	0.000	287.700	20.00	Tie-On	
99.00	0.800	287.700	99.00	Begin CATHEDRAL MWD Surveys	
1181.00	13.100	337.900	1173.99	Tie-Into CATHEDRAL MWD Surveys	
1279.00	13.850	339.570	1269.29	Begin BHI MWD+IFR Surveys	
7069.00	47.403	180.211	6875.20	SSPG	
7190.00	57.943	178.639	6948.98	NBRR	
7296.00	69.754	177.646	6995.86	N470_B_CK	
7553.00	86.581	179.079	7042.96	7" Casing Point	
12624.00	89.560	178.810	7022.11	Last BHI MWD+IFR Surveys	
12676.00	89.560	178.810	7022.51	Projection to Bit	