

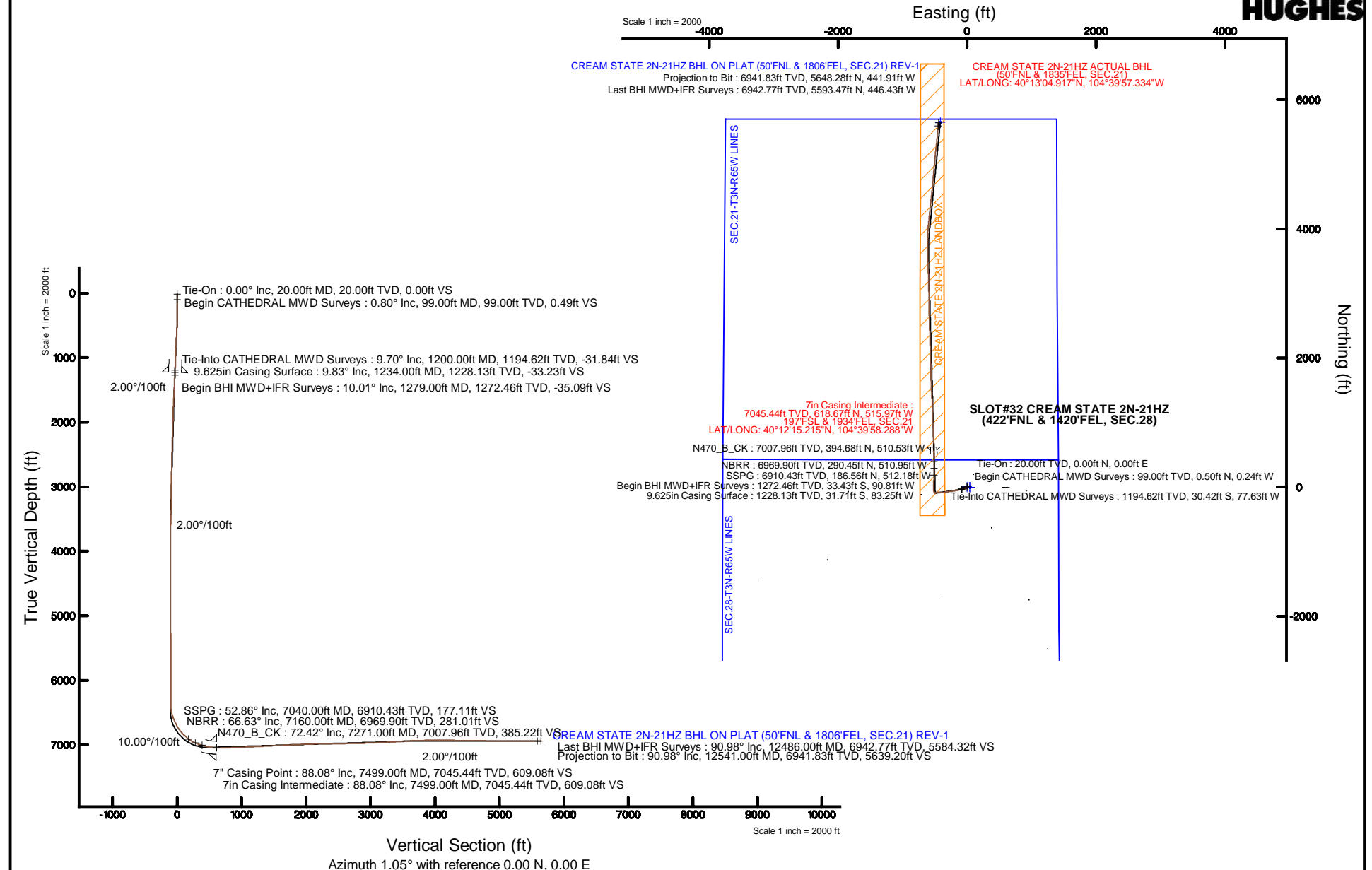
KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#32 CREAM STATE 2N-21HZ (422'FNL & 1420'FEL, SEC.28)
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: CREAM STATE 2N-21HZ
 Facility: SEC.28-T3N-R65W Wellbore: CREAM STATE 2N-21HZ PWB



Plot reference wellpath is CREAM STATE 2N-21HZ (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#32 CREAM STATE 2N-21HZ (422'FNL & 1420'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#32 CREAM STATE 2N-21HZ (422'FNL & 1420'FEL, SEC.28)
Area	COLORADO	Well	CREAM STATE 2N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM STATE 2N-21HZ AWB <12541>
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 9:23:13 AM
Convergence at slot	0.22° East	Database/Source file	WellArchitectAPC/CREAM_STATE_2N-21HZ_AWB__12541_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2844.54	1786.65	1734139.27	14600660.62	40°12'09.101"N	104°39'51.638"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#32 CREAM STATE 2N-21HZ (422'FNL & 1420'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	1.05°

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Area	COLORADO	Well	CREAM STATE 2N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM STATE 2N-21HZ AWB <12541>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (138 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	334.200	0.00	0.00	0.00	0.00	40°12'09.101"N	104°39'51.638"W	0.00	
20.00	0.000	334.200	20.00	0.00	0.00	0.00	40°12'09.101"N	104°39'51.638"W	0.00	Tie-On
99.00	0.800	334.200	99.00	0.49	0.50	-0.24	40°12'09.106"N	104°39'51.641"W	1.01	Begin CATHEDRAL MWD Surveys
163.00	0.400	352.000	162.99	1.11	1.12	-0.47	40°12'09.112"N	104°39'51.644"W	0.68	
221.00	0.400	315.300	220.99	1.45	1.46	-0.64	40°12'09.115"N	104°39'51.646"W	0.43	
278.00	0.400	280.200	277.99	1.62	1.64	-0.97	40°12'09.117"N	104°39'51.651"W	0.42	
335.00	0.400	275.400	334.99	1.67	1.70	-1.37	40°12'09.118"N	104°39'51.656"W	0.06	
399.00	1.200	227.000	398.98	1.22	1.26	-2.08	40°12'09.113"N	104°39'51.665"W	1.53	
463.00	1.500	220.900	462.97	0.11	0.17	-3.12	40°12'09.103"N	104°39'51.678"W	0.52	
527.00	2.500	215.700	526.93	-1.68	-1.60	-4.48	40°12'09.085"N	104°39'51.696"W	1.59	
591.00	3.200	227.500	590.85	-4.06	-3.94	-6.61	40°12'09.062"N	104°39'51.723"W	1.42	
655.00	4.500	236.900	654.70	-6.70	-6.52	-10.03	40°12'09.037"N	104°39'51.767"W	2.25	
719.00	5.100	235.900	718.48	-9.75	-9.48	-14.49	40°12'09.007"N	104°39'51.825"W	0.95	
783.00	6.200	239.800	782.17	-13.18	-12.82	-19.83	40°12'08.974"N	104°39'51.894"W	1.82	
846.00	6.500	243.400	844.78	-16.60	-16.12	-25.96	40°12'08.942"N	104°39'51.973"W	0.79	
910.00	7.500	249.600	908.30	-19.81	-19.20	-33.12	40°12'08.911"N	104°39'52.065"W	1.96	
974.00	8.600	255.800	971.67	-22.59	-21.83	-41.67	40°12'08.885"N	104°39'52.175"W	2.19	
1036.00	9.300	255.600	1032.92	-25.15	-24.21	-51.02	40°12'08.862"N	104°39'52.295"W	1.13	
1101.00	9.700	257.300	1097.03	-27.85	-26.72	-61.45	40°12'08.837"N	104°39'52.430"W	0.75	
1165.00	9.600	257.100	1160.12	-30.42	-29.10	-71.91	40°12'08.813"N	104°39'52.565"W	0.16	
1200.00	9.700	257.000	1194.62	-31.84	-30.42	-77.63	40°12'08.800"N	104°39'52.638"W	0.29	Tie-Into CATHEDRAL MWD Surveys
1279.00	10.010	257.250	1272.46	-35.09	-33.43	-90.81	40°12'08.771"N	104°39'52.808"W	0.40	Begin BHI MWD+IFR Surveys
1373.00	10.240	255.110	1364.99	-39.34	-37.38	-106.85	40°12'08.732"N	104°39'53.015"W	0.47	
1466.00	10.620	256.240	1456.46	-43.80	-41.54	-123.16	40°12'08.690"N	104°39'53.225"W	0.46	
1559.00	10.490	257.640	1547.88	-47.95	-45.39	-139.76	40°12'08.652"N	104°39'53.439"W	0.31	
1653.00	10.040	256.120	1640.38	-52.05	-49.19	-156.07	40°12'08.615"N	104°39'53.649"W	0.56	
1746.00	9.870	254.880	1731.98	-56.36	-53.21	-171.63	40°12'08.575"N	104°39'53.850"W	0.29	
1839.00	9.940	262.230	1823.60	-59.81	-56.38	-187.28	40°12'08.544"N	104°39'54.052"W	1.36	
1933.00	9.950	259.740	1916.19	-62.65	-58.92	-203.31	40°12'08.519"N	104°39'54.258"W	0.46	
2026.00	9.700	261.950	2007.82	-65.46	-61.45	-218.98	40°12'08.494"N	104°39'54.460"W	0.49	
2119.00	9.390	259.747	2099.53	-68.19	-63.90	-234.20	40°12'08.470"N	104°39'54.656"W	0.52	
2212.00	9.680	262.580	2191.25	-70.83	-66.26	-249.42	40°12'08.446"N	104°39'54.852"W	0.59	
2306.00	10.870	263.070	2283.74	-73.23	-68.35	-266.05	40°12'08.426"N	104°39'55.067"W	1.27	
2399.00	10.440	262.160	2375.14	-75.75	-70.55	-283.11	40°12'08.404"N	104°39'55.287"W	0.50	
2492.00	9.530	258.560	2466.73	-78.71	-73.23	-299.00	40°12'08.377"N	104°39'55.491"W	1.19	
2585.00	10.430	263.060	2558.32	-81.55	-75.77	-314.90	40°12'08.352"N	104°39'55.696"W	1.28	
2678.00	9.960	262.510	2649.85	-83.92	-77.84	-331.23	40°12'08.332"N	104°39'55.907"W	0.52	
2771.00	11.170	267.620	2741.28	-85.65	-79.26	-348.21	40°12'08.318"N	104°39'56.126"W	1.64	
2954.00	11.480	269.100	2920.71	-87.33	-80.28	-384.13	40°12'08.308"N	104°39'56.589"W	0.23	
3044.00	11.220	269.470	3008.95	-87.88	-80.51	-401.84	40°12'08.305"N	104°39'56.817"W	0.30	
3133.00	10.810	267.220	3096.31	-88.68	-80.99	-418.83	40°12'08.301"N	104°39'57.036"W	0.67	
3223.00	10.290	268.170	3184.79	-89.65	-81.66	-435.30	40°12'08.294"N	104°39'57.248"W	0.61	
3313.00	9.450	264.010	3273.46	-90.96	-82.69	-450.68	40°12'08.284"N	104°39'57.446"W	1.22	
3403.00	8.420	261.940	3362.37	-92.91	-84.38	-464.55	40°12'08.267"N	104°39'57.625"W	1.20	
3491.00	7.110	255.050	3449.56	-95.43	-86.69	-476.19	40°12'08.244"N	104°39'57.775"W	1.82	

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Area	COLORADO	Well	CREAM STATE 2N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM STATE 2N-21HZ AWB <12541>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (138 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3581.00	5.150	252.230	3539.04	-98.27	-89.36	-485.42	40°12'08.218"N	104°39'57.894"W	2.20	
3671.00	3.690	245.930	3628.77	-100.80	-91.77	-491.91	40°12'08.194"N	104°39'57.978"W	1.71	
3760.00	2.100	236.060	3717.66	-102.95	-93.85	-495.88	40°12'08.174"N	104°39'58.029"W	1.87	
3850.00	0.350	158.630	3807.64	-104.15	-95.03	-497.15	40°12'08.162"N	104°39'58.045"W	2.28	
4030.00	0.260	316.050	3987.63	-104.37	-95.25	-497.23	40°12'08.160"N	104°39'58.046"W	0.33	
4300.00	1.120	244.120	4257.61	-105.13	-95.96	-500.03	40°12'08.153"N	104°39'58.082"W	0.40	
4479.00	0.350	226.050	4436.60	-106.31	-97.10	-502.00	40°12'08.141"N	104°39'58.108"W	0.44	
4839.00	0.700	307.400	4796.59	-105.79	-96.53	-504.54	40°12'08.147"N	104°39'58.140"W	0.20	
5198.00	0.960	23.580	5155.56	-101.71	-92.44	-505.08	40°12'08.187"N	104°39'58.147"W	0.29	
5377.00	1.040	18.730	5334.53	-98.78	-89.53	-503.96	40°12'08.216"N	104°39'58.133"W	0.07	
5467.00	0.570	65.010	5424.52	-97.80	-88.56	-503.29	40°12'08.226"N	104°39'58.124"W	0.85	
5647.00	1.560	3.250	5604.49	-94.96	-85.74	-502.34	40°12'08.254"N	104°39'58.112"W	0.77	
5736.00	0.890	184.900	5693.49	-94.44	-85.22	-502.33	40°12'08.259"N	104°39'58.112"W	2.75	
5916.00	0.770	242.460	5873.47	-96.41	-87.17	-503.52	40°12'08.240"N	104°39'58.127"W	0.45	
6006.00	1.350	190.810	5963.46	-97.75	-88.49	-504.26	40°12'08.226"N	104°39'58.137"W	1.18	
6185.00	0.640	272.730	6142.43	-99.80	-90.51	-505.65	40°12'08.206"N	104°39'58.155"W	0.79	
6365.00	1.390	316.870	6322.41	-98.20	-88.87	-508.15	40°12'08.223"N	104°39'58.187"W	0.57	
6455.00	2.350	329.680	6412.36	-95.84	-86.48	-509.82	40°12'08.246"N	104°39'58.208"W	1.16	
6499.00	6.440	345.190	6456.22	-92.70	-83.32	-510.91	40°12'08.278"N	104°39'58.222"W	9.60	
6544.00	12.550	353.260	6500.58	-85.42	-76.02	-512.13	40°12'08.350"N	104°39'58.238"W	13.86	
6634.00	22.570	356.770	6586.28	-58.44	-48.99	-514.26	40°12'08.617"N	104°39'58.266"W	11.19	
6724.00	26.060	358.970	6668.29	-21.45	-11.97	-515.59	40°12'08.983"N	104°39'58.283"W	4.01	
6814.00	32.510	0.970	6746.75	22.54	32.03	-515.53	40°12'09.417"N	104°39'58.282"W	7.25	
6904.00	43.980	2.150	6817.31	78.16	87.62	-513.95	40°12'09.967"N	104°39'58.262"W	12.77	
6993.00	46.440	0.470	6880.01	141.31	150.76	-512.52	40°12'10.591"N	104°39'58.243"W	3.07	
7040.00†	52.858	0.600	6910.43	177.11	186.56	-512.18	40°12'10.944"N	104°39'58.239"W	13.66	SSPG
7083.00	58.730	0.700	6934.59	212.65	222.10	-511.78	40°12'11.296"N	104°39'58.234"W	13.66	
7160.00†	66.627	0.700	6969.90	281.01	290.45	-510.95	40°12'11.971"N	104°39'58.223"W	10.26	NBRR
7173.00	67.960	0.700	6974.92	293.00	302.44	-510.80	40°12'12.090"N	104°39'58.221"W	10.26	
7218.00	70.180	0.030	6991.00	335.02	344.47	-510.53	40°12'12.505"N	104°39'58.218"W	5.13	
7263.00	72.140	0.010	7005.53	377.60	387.06	-510.52	40°12'12.926"N	104°39'58.218"W	4.36	
7271.00†	72.418	359.814	7007.96	385.22	394.68	-510.53	40°12'13.001"N	104°39'58.218"W	4.18	N470_B_CK
7307.00	73.670	358.940	7018.46	419.64	429.11	-510.91	40°12'13.341"N	104°39'58.223"W	4.18	
7352.00	78.910	358.650	7029.12	463.31	472.80	-511.83	40°12'13.773"N	104°39'58.234"W	11.66	
7397.00	81.880	358.150	7036.63	507.63	517.15	-513.07	40°12'14.211"N	104°39'58.250"W	6.69	
7459.00	85.780	358.500	7043.29	569.19	578.75	-514.87	40°12'14.820"N	104°39'58.274"W	6.32	
7499.00†	88.079	358.333	7045.44	609.08	618.67	-515.97	40°12'15.215"N	104°39'58.288"W	5.76	7" Casing Point
7526.00	89.630	358.220	7045.98	636.05	645.66	-516.78	40°12'15.481"N	104°39'58.298"W	5.76	
7616.00	90.460	358.220	7045.91	725.94	735.61	-519.58	40°12'16.370"N	104°39'58.334"W	0.92	
7706.00	91.810	358.760	7044.12	815.83	825.56	-521.95	40°12'17.259"N	104°39'58.365"W	1.62	
7796.00	91.380	357.560	7041.62	905.67	915.48	-524.84	40°12'18.148"N	104°39'58.402"W	1.42	
7886.00	92.210	358.310	7038.80	995.50	1005.37	-528.08	40°12'19.036"N	104°39'58.444"W	1.24	
7974.00	92.800	358.290	7034.95	1083.31	1093.25	-530.69	40°12'19.904"N	104°39'58.478"W	0.67	
8064.00	92.950	357.800	7030.44	1173.07	1183.08	-533.75	40°12'20.792"N	104°39'58.517"W	0.57	
8153.00	93.050	357.560	7025.78	1261.80	1271.89	-537.35	40°12'21.670"N	104°39'58.564"W	0.29	

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WELLPATH DATA (138 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8243.00	92.580	357.150	7021.36	1351.50	1361.68	-541.50	40°12'22.557"N	104°39'58.617"W	0.69	
8333.00	92.740	356.480	7017.18	1441.16	1451.45	-546.49	40°12'23.444"N	104°39'58.682"W	0.76	
8423.00	93.140	357.410	7012.57	1530.81	1541.20	-551.28	40°12'24.331"N	104°39'58.743"W	1.12	
8513.00	92.520	357.660	7008.12	1620.53	1631.01	-555.15	40°12'25.219"N	104°39'58.793"W	0.74	
8603.00	92.740	358.860	7003.99	1710.32	1720.87	-557.88	40°12'26.107"N	104°39'58.828"W	1.35	
8693.00	93.020	358.650	6999.47	1800.14	1810.73	-559.83	40°12'26.995"N	104°39'58.854"W	0.39	
8783.00	92.430	358.260	6995.19	1889.94	1900.60	-562.26	40°12'27.883"N	104°39'58.885"W	0.79	
8872.00	91.870	358.870	6991.85	1978.79	1989.51	-564.48	40°12'28.761"N	104°39'58.914"W	0.93	
8962.00	92.210	358.620	6988.65	2068.66	2079.43	-566.45	40°12'29.650"N	104°39'58.939"W	0.47	
9052.00	90.800	358.030	6986.29	2158.53	2169.36	-569.08	40°12'30.538"N	104°39'58.973"W	1.70	
9141.00	90.890	357.550	6984.97	2247.37	2258.28	-572.52	40°12'31.417"N	104°39'59.017"W	0.55	
9231.00	90.520	359.060	6983.87	2337.26	2348.23	-575.18	40°12'32.306"N	104°39'59.051"W	1.73	
9321.00	90.610	358.660	6982.98	2427.19	2438.21	-576.97	40°12'33.195"N	104°39'59.075"W	0.46	
9411.00	90.800	358.250	6981.87	2517.09	2528.17	-579.39	40°12'34.084"N	104°39'59.106"W	0.50	
9501.00	91.070	357.780	6980.40	2606.95	2618.10	-582.51	40°12'34.973"N	104°39'59.146"W	0.60	
9591.00	91.230	357.670	6978.60	2696.78	2708.01	-586.08	40°12'35.861"N	104°39'59.192"W	0.22	
9680.00	91.130	359.070	6976.76	2785.66	2796.96	-588.61	40°12'36.740"N	104°39'59.225"W	1.58	
9770.00	91.940	359.840	6974.35	2875.59	2886.92	-589.47	40°12'37.629"N	104°39'59.236"W	1.24	
9950.00	92.240	359.090	6967.79	3055.40	3066.79	-591.15	40°12'39.407"N	104°39'59.258"W	0.45	
10040.00	92.310	358.760	6964.22	3145.27	3156.70	-592.84	40°12'40.295"N	104°39'59.279"W	0.37	
10129.00	92.670	357.960	6960.35	3234.09	3245.58	-595.38	40°12'41.174"N	104°39'59.312"W	0.98	
10219.00	92.950	357.720	6955.94	3323.84	3335.41	-598.77	40°12'42.061"N	104°39'59.356"W	0.41	
10309.00	93.600	357.680	6950.80	3413.54	3425.19	-602.38	40°12'42.949"N	104°39'59.402"W	0.72	
10399.00	94.370	357.600	6944.54	3503.16	3514.90	-606.07	40°12'43.835"N	104°39'59.450"W	0.86	
10489.00	92.710	358.350	6938.98	3592.85	3604.66	-609.25	40°12'44.722"N	104°39'59.491"W	2.02	
10578.00	91.840	359.050	6935.45	3681.71	3693.57	-611.26	40°12'45.601"N	104°39'59.517"W	1.25	
10668.00	91.720	1.020	6932.66	3771.65	3783.52	-611.21	40°12'46.490"N	104°39'59.516"W	2.19	
10758.00	90.920	1.360	6930.58	3861.62	3873.48	-609.34	40°12'47.379"N	104°39'59.492"W	0.97	
10848.00	90.330	3.780	6929.60	3951.58	3963.37	-605.30	40°12'48.267"N	104°39'59.440"W	2.77	
10937.00	89.870	5.710	6929.44	4040.39	4052.07	-597.94	40°12'49.143"N	104°39'59.345"W	2.23	
11027.00	89.960	5.100	6929.58	4130.13	4141.66	-589.47	40°12'50.029"N	104°39'59.236"W	0.69	
11117.00	89.590	6.620	6929.93	4219.81	4231.19	-580.28	40°12'50.913"N	104°39'59.118"W	1.74	
11207.00	88.860	6.100	6931.15	4309.41	4320.63	-570.31	40°12'51.797"N	104°39'58.989"W	1.00	
11297.00	89.130	5.940	6932.73	4399.06	4410.12	-560.87	40°12'52.682"N	104°39'58.868"W	0.35	
11386.00	89.840	6.230	6933.53	4487.71	4498.61	-551.44	40°12'53.556"N	104°39'58.746"W	0.86	
11476.00	88.920	5.940	6934.50	4577.36	4588.10	-541.90	40°12'54.440"N	104°39'58.623"W	1.07	
11566.00	89.070	5.610	6936.08	4667.04	4677.63	-532.84	40°12'55.325"N	104°39'58.506"W	0.40	
11655.00	89.190	5.150	6937.43	4755.78	4766.23	-524.50	40°12'56.201"N	104°39'58.399"W	0.53	
11745.00	89.100	4.910	6938.77	4845.55	4855.87	-516.61	40°12'57.086"N	104°39'58.297"W	0.28	
11835.00	89.260	4.350	6940.06	4935.37	4945.57	-509.34	40°12'57.973"N	104°39'58.204"W	0.65	
11925.00	89.290	5.800	6941.20	5025.13	5035.20	-501.38	40°12'58.859"N	104°39'58.101"W	1.61	
12015.00	89.660	5.440	6942.03	5114.84	5124.77	-492.57	40°12'59.744"N	104°39'57.987"W	0.57	
12105.00	89.380	6.290	6942.78	5204.52	5214.29	-483.37	40°13'00.628"N	104°39'57.869"W	0.99	
12194.00	89.530	5.970	6943.63	5293.17	5302.78	-473.87	40°13'01.503"N	104°39'57.746"W	0.40	
12284.00	89.900	5.680	6944.07	5382.86	5392.31	-464.74	40°13'02.388"N	104°39'57.629"W	0.52	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 CREAM STATE 2N-21HZ (422'FNL & 1420'FEL, SEC.28)
Area	COLORADO	Well	CREAM STATE 2N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM STATE 2N-21HZ AWB <12541>
Facility	SEC.28-T3N-R65W		

WELLPATH DATA (138 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12374.00	90.240	5.250	6943.96	5472.59	5481.90	-456.17	40°13'03.273"N	104°39'57.518"W	0.61	
12486.00	90.980	4.720	6942.77	5584.32	5593.47	-446.43	40°13'04.375"N	104°39'57.393"W	0.81	Last BHI MWD+IFR Surveys
12541.00	90.980	4.720	6941.83	5639.20	5648.28	-441.91	40°13'04.917"N	104°39'57.334"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: CREAM STATE 2N-21HZ AWB <12541> Ref Wellpath: CREAM STATE 2N-21HZ 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	1245.00	1225.00	20.00	1238.97	0.00	0.00	-32.13	-85.08	
9.625in Casing Surface	20.00	1234.00	1214.00	20.00	1228.13	0.00	0.00	-31.71	-83.25	
8.75in Open Hole	1245.00	7508.00	6263.00	1238.97	7045.70	-32.13	-85.08	627.67	-516.23	
7in Casing Intermediate	20.00	7499.00	7479.00	20.00	7045.44	0.00	0.00	618.67	-515.97	
6.125in Open Hole	7508.00	12541.00	5033.00	7045.70	6941.83	627.67	-516.23	5648.28	-441.91	

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	44.93	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon	
SEC.28-T3N-R65W LINES	0.00	-0.40	44.93	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon	
CREAM STATE 2N-21HZ BHL ON PLAT (50'FNL & 1806'FEL, SEC.21) REV-1	6944.00	5648.82	-413.63	1733704.45	14606305.63	40°13'04.922"N	104°39'56.970"W	point	
CREAM STATE 2N-21HZ LANDBOX	6944.00	0.00	0.00	1734139.27	14600660.62	40°12'09.101"N	104°39'51.638"W	polygon	

WELLPATH COMPOSITION - Ref Wellbore: CREAM STATE 2N-21HZ AWB <12541> Ref Wellpath: CREAM STATE 2N-21HZ AWP									
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore			
20.00	1200.00	Custom APC_ISCWSA REV 2 MWD		CATHEDRAL ENERGY MWD SURVEYS <99-1200>		CREAM STATE 2N-21HZ AWB <12541>			
1200.00	7459.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)		BHI MWD+IFR SURVEYS 8 3/4" HOLE <1279-7459>		CREAM STATE 2N-21HZ AWB <12541>			
7459.00	12486.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)		BHI MWD+IFR SURVEYS 6 1/8" HOLE <7526-12486>		CREAM STATE 2N-21HZ AWB <12541>			
12486.00	12541.00	Blind Drilling (std)		Projection to bit		CREAM STATE 2N-21HZ AWB <12541>			

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#32 CREAM STATE 2N-21HZ (422'FNL & 1420'FEL, SEC.28)
Area	COLORADO	Well	CREAM STATE 2N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	CREAM STATE 2N-21HZ AWB <12541>
Facility	SEC.28-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
20.00	0.000	334.200	20.00	Tie-On
99.00	0.800	334.200	99.00	Begin CATHEDRAL MWD Surveys
1200.00	9.700	257.000	1194.62	Tie-Into CATHEDRAL MWD Surveys
1279.00	10.010	257.250	1272.46	Begin BHI MWD+IFR Surveys
7040.00	52.858	0.600	6910.43	SSPG
7160.00	66.627	0.700	6969.90	NBRR
7271.00	72.418	359.814	7007.96	N470_B_CK
7499.00	88.079	358.333	7045.44	7" Casing Point
12486.00	90.980	4.720	6942.77	Last BHI MWD+IFR Surveys
12541.00	90.980	4.720	6941.83	Projection to Bit