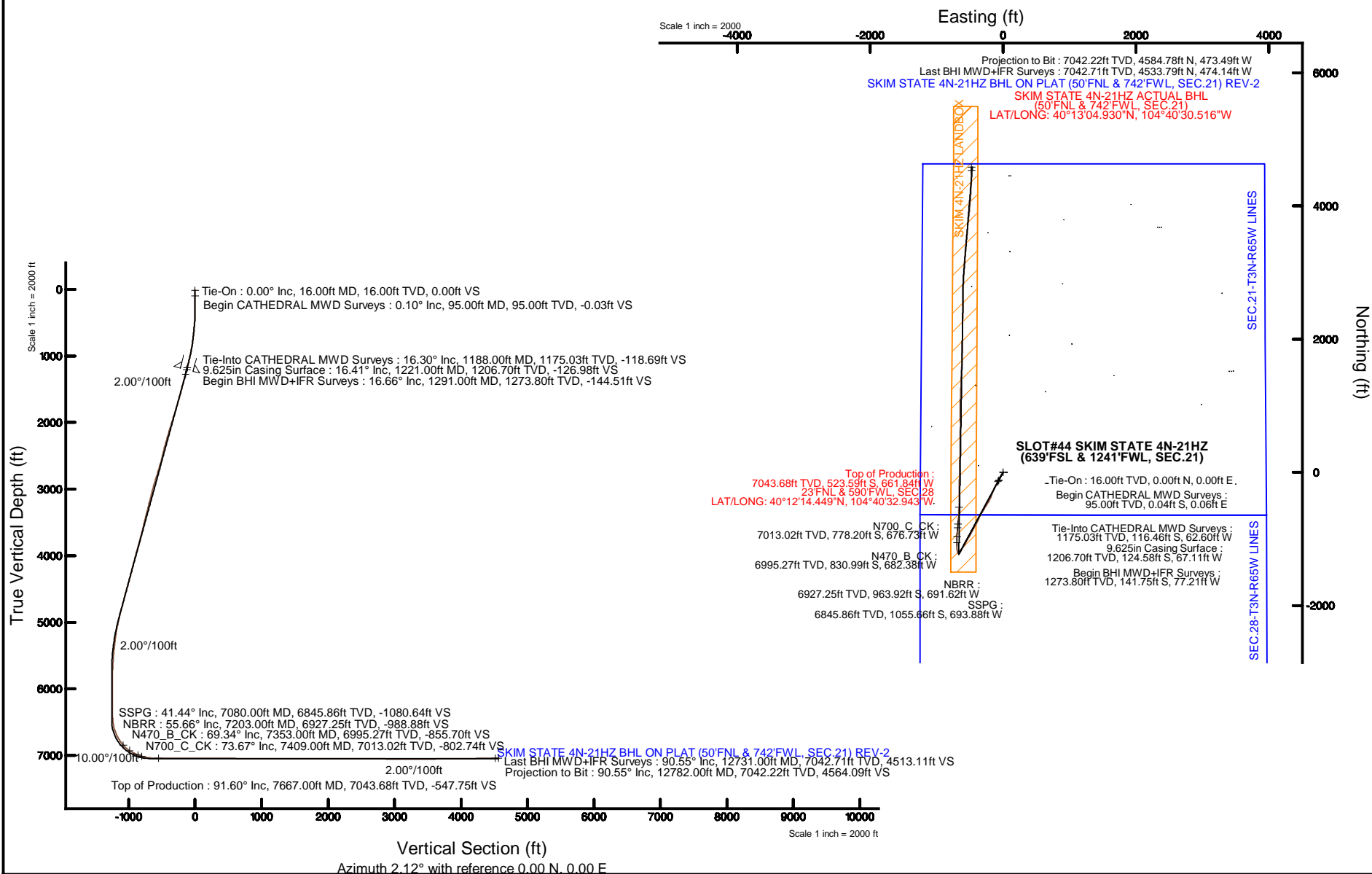


Location:	COLORADO	Slot:	SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	SKIM STATE 4N-21HZ
Facility:	SEC.21-T3N-R65W	Wellbore:	SKIM STATE 4N-21HZ PWB



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21)
Area	COLORADO	Well	SKIM STATE 4N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SKIM STATE 4N-21HZ AWB <12782>
Facility	SEC.21-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	6/11/2015 at 1:14:12 PM
Convergence at slot	0.21° East	Database/Source file	WellArchitectAPC/SKIM_STATE_4N-21HZ_AWB__12782_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3678.95	-2412.79	1731593.28	14601715.54	40°12'19.624"N	104°40'24.413"W
Facility Reference Pt			1733991.21	14605402.13	40°12'55.980"N	104°39'53.316"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	XTREME 23 (16'KB) (RKB) to Facility Vertical Datum	4862.00ft
Horizontal Reference Pt	Slot	XTREME 23 (16'KB) (RKB) to Mean Sea Level	4862.00ft
Vertical Reference Pt	XTREME 23 (16'KB) (RKB)	XTREME 23 (16'KB) (RKB) to Mud Line at Slot (SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21))	4862.00ft
MD Reference Pt	XTREME 23 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	2.12°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21)
Area	COLORADO	Well	SKIM STATE 4N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SKIM STATE 4N-21HZ AWB <12782>
Facility	SEC.21-T3N-R65W		

WELLPATH DATA (141 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	120.800	0.00	0.00	0.00	0.00	40°12'19.624"N	104°40'24.413"W	0.00	
16.00	0.000	120.800	16.00	0.00	0.00	0.00	40°12'19.624"N	104°40'24.413"W	0.00	Tie-On
95.00	0.100	120.800	95.00	-0.03	-0.04	0.06	40°12'19.623"N	104°40'24.412"W	0.13	Begin CATHEDRAL MWD Surveys
158.00	0.500	86.100	158.00	-0.03	-0.04	0.38	40°12'19.623"N	104°40'24.408"W	0.67	
215.00	0.400	60.700	215.00	0.10	0.07	0.80	40°12'19.624"N	104°40'24.402"W	0.39	
276.00	0.400	135.400	276.00	0.06	0.02	1.14	40°12'19.624"N	104°40'24.398"W	0.80	
334.00	0.700	201.800	333.99	-0.41	-0.45	1.15	40°12'19.619"N	104°40'24.398"W	1.13	
398.00	2.200	205.000	397.97	-1.91	-1.93	0.48	40°12'19.605"N	104°40'24.407"W	2.35	
462.00	3.900	202.300	461.88	-5.08	-5.05	-0.86	40°12'19.574"N	104°40'24.424"W	2.66	
526.00	5.100	206.600	525.68	-9.72	-9.61	-2.96	40°12'19.529"N	104°40'24.451"W	1.95	
590.00	6.300	212.600	589.36	-15.33	-15.11	-6.13	40°12'19.474"N	104°40'24.492"W	2.09	
654.00	7.100	212.900	652.93	-21.76	-21.39	-10.17	40°12'19.412"N	104°40'24.544"W	1.25	
718.00	7.700	215.300	716.39	-28.74	-28.21	-14.79	40°12'19.345"N	104°40'24.603"W	1.05	
782.00	8.600	210.900	779.75	-36.53	-35.82	-19.73	40°12'19.270"N	104°40'24.667"W	1.71	
845.00	10.500	209.400	841.87	-45.76	-44.86	-24.97	40°12'19.180"N	104°40'24.735"W	3.04	
909.00	11.900	209.000	904.65	-56.83	-55.72	-31.03	40°12'19.073"N	104°40'24.813"W	2.19	
972.00	12.700	204.700	966.20	-69.02	-67.69	-37.07	40°12'18.955"N	104°40'24.891"W	1.93	
1035.00	14.100	207.700	1027.49	-82.33	-80.77	-43.53	40°12'18.825"N	104°40'24.974"W	2.48	
1099.00	15.300	207.500	1089.39	-96.99	-95.17	-51.06	40°12'18.683"N	104°40'25.071"W	1.88	
1163.00	16.000	209.100	1151.02	-112.48	-110.36	-59.24	40°12'18.533"N	104°40'25.176"W	1.28	
1188.00	16.300	208.600	1175.03	-118.69	-116.46	-62.60	40°12'18.473"N	104°40'25.220"W	1.32	Tie-Into CATHEDRAL MWD Surveys
1291.00	16.660	211.410	1273.80	-144.51	-141.75	-77.21	40°12'18.223"N	104°40'25.408"W	0.85	Begin BHI MWD+IFR Surveys
1387.00	16.400	209.870	1365.84	-168.51	-165.24	-91.13	40°12'17.991"N	104°40'25.587"W	0.53	
1482.00	17.160	209.060	1456.79	-192.87	-189.12	-104.62	40°12'17.755"N	104°40'25.761"W	0.84	
1576.00	16.220	207.750	1546.83	-217.07	-212.86	-117.47	40°12'17.520"N	104°40'25.927"W	1.08	
1672.00	17.640	206.280	1638.67	-242.43	-237.77	-130.15	40°12'17.274"N	104°40'26.090"W	1.54	
1767.00	16.940	202.160	1729.38	-268.57	-263.50	-141.75	40°12'17.020"N	104°40'26.240"W	1.48	
1862.00	18.720	202.300	1819.81	-295.88	-290.42	-152.75	40°12'16.754"N	104°40'26.382"W	1.87	
1957.00	18.110	200.710	1909.95	-324.19	-318.34	-163.76	40°12'16.478"N	104°40'26.523"W	0.83	
2052.00	17.300	199.180	2000.45	-351.69	-345.49	-173.62	40°12'16.209"N	104°40'26.650"W	0.98	
2147.00	17.900	203.540	2091.00	-378.79	-372.22	-184.09	40°12'15.945"N	104°40'26.785"W	1.52	
2242.00	18.340	206.510	2181.29	-405.99	-398.98	-196.60	40°12'15.681"N	104°40'26.947"W	1.08	
2337.00	17.470	204.910	2271.69	-432.75	-425.29	-209.27	40°12'15.421"N	104°40'27.110"W	1.05	
2431.00	15.910	211.720	2361.74	-456.97	-449.05	-221.99	40°12'15.186"N	104°40'27.274"W	2.66	
2526.00	16.630	214.110	2452.93	-479.82	-471.38	-236.46	40°12'14.965"N	104°40'27.460"W	1.03	
2622.00	17.060	215.160	2544.81	-503.28	-494.27	-252.28	40°12'14.739"N	104°40'27.664"W	0.55	
2717.00	17.840	210.200	2635.45	-527.80	-518.24	-267.62	40°12'14.502"N	104°40'27.862"W	1.77	
2812.00	19.480	210.420	2725.45	-554.59	-544.48	-282.96	40°12'14.243"N	104°40'28.060"W	1.73	
3003.00	19.010	209.330	2905.78	-610.30	-599.06	-314.33	40°12'13.704"N	104°40'28.464"W	0.31	
3194.00	14.970	210.540	3088.40	-659.68	-647.45	-342.11	40°12'13.226"N	104°40'28.822"W	2.12	
3289.00	16.630	207.750	3179.81	-682.73	-670.05	-354.68	40°12'13.002"N	104°40'28.984"W	1.92	
3384.00	15.440	205.020	3271.12	-706.64	-693.54	-366.36	40°12'12.770"N	104°40'29.134"W	1.48	
3479.00	14.790	204.170	3362.83	-729.53	-716.06	-376.67	40°12'12.547"N	104°40'29.267"W	0.72	
3575.00	16.140	203.200	3455.35	-753.33	-739.51	-386.94	40°12'12.316"N	104°40'29.400"W	1.43	
3669.00	15.000	209.600	3545.91	-776.32	-762.09	-398.10	40°12'12.093"N	104°40'29.543"W	2.19	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21)
Area	COLORADO	Well	SKIM STATE 4N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SKIM STATE 4N-21HZ AWB <12782>
Facility	SEC.21-T3N-R65W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3765.00	15.350	211.010	3638.56	-798.47	-783.79	-410.78	40°12'11.878"N	104°40'29.707"W	0.53	
3860.00	16.300	206.620	3729.96	-821.61	-806.48	-423.23	40°12'11.654"N	104°40'29.867"W	1.61	
3956.00	16.890	207.090	3821.96	-846.51	-830.94	-435.62	40°12'11.412"N	104°40'30.027"W	0.63	
4051.00	17.670	208.670	3912.67	-871.92	-855.88	-448.82	40°12'11.166"N	104°40'30.197"W	0.96	
4146.00	17.160	209.000	4003.32	-897.32	-880.79	-462.54	40°12'10.920"N	104°40'30.374"W	0.55	
4241.00	15.790	207.020	4094.42	-921.55	-904.56	-475.20	40°12'10.685"N	104°40'30.537"W	1.56	
4336.00	15.910	208.130	4185.81	-944.97	-927.56	-487.21	40°12'10.457"N	104°40'30.692"W	0.34	
4431.00	16.650	211.500	4277.00	-968.54	-950.65	-500.46	40°12'10.229"N	104°40'30.863"W	1.26	
4526.00	16.480	213.030	4368.06	-991.96	-973.55	-514.92	40°12'10.003"N	104°40'31.049"W	0.49	
4621.00	17.210	211.070	4458.98	-1015.82	-996.88	-529.52	40°12'09.772"N	104°40'31.237"W	0.97	
4716.00	17.800	208.790	4549.58	-1041.09	-1021.65	-543.76	40°12'09.528"N	104°40'31.421"W	0.95	
4812.00	16.850	208.740	4641.22	-1066.65	-1046.71	-557.52	40°12'09.280"N	104°40'31.598"W	0.99	
4906.00	17.360	209.360	4731.07	-1091.29	-1070.88	-570.95	40°12'09.041"N	104°40'31.771"W	0.58	
5001.00	16.780	210.700	4821.88	-1115.94	-1095.02	-584.90	40°12'08.803"N	104°40'31.951"W	0.74	
5096.00	14.570	212.230	4913.34	-1138.32	-1116.92	-598.27	40°12'08.586"N	104°40'32.123"W	2.37	
5191.00	14.280	214.400	5005.35	-1158.56	-1136.70	-611.27	40°12'08.391"N	104°40'32.291"W	0.65	
5286.00	12.460	214.630	5097.77	-1177.11	-1154.80	-623.71	40°12'08.212"N	104°40'32.451"W	1.92	
5381.00	9.720	213.790	5190.99	-1192.59	-1169.90	-634.00	40°12'08.063"N	104°40'32.584"W	2.89	
5476.00	8.050	207.810	5284.85	-1205.41	-1182.45	-641.56	40°12'07.939"N	104°40'32.681"W	2.01	
5571.00	7.270	209.420	5379.00	-1216.74	-1193.57	-647.62	40°12'07.829"N	104°40'32.759"W	0.85	
5667.00	4.880	207.890	5474.45	-1225.82	-1202.47	-652.51	40°12'07.741"N	104°40'32.822"W	2.50	
5762.00	4.490	204.990	5569.13	-1232.89	-1209.41	-655.97	40°12'07.672"N	104°40'32.867"W	0.48	
5857.00	2.920	196.380	5663.93	-1238.66	-1215.10	-658.23	40°12'07.616"N	104°40'32.896"W	1.75	
5952.00	2.520	177.600	5758.83	-1243.08	-1219.51	-658.82	40°12'07.572"N	104°40'32.903"W	1.02	
6047.00	0.480	278.930	5853.80	-1245.12	-1221.54	-659.13	40°12'07.552"N	104°40'32.907"W	2.80	
6238.00	0.790	247.500	6044.79	-1245.57	-1221.92	-661.13	40°12'07.549"N	104°40'32.933"W	0.24	
6428.00	1.880	268.350	6234.73	-1246.32	-1222.51	-665.46	40°12'07.543"N	104°40'32.989"W	0.62	
6524.00	2.610	313.580	6330.67	-1244.98	-1221.05	-668.62	40°12'07.557"N	104°40'33.030"W	1.93	
6619.00	3.190	312.830	6425.54	-1241.83	-1217.76	-672.12	40°12'07.590"N	104°40'33.075"W	0.61	
6714.00	9.600	328.250	6519.91	-1233.52	-1209.22	-678.24	40°12'07.674"N	104°40'33.154"W	6.93	
6809.00	18.230	342.540	6612.06	-1212.89	-1188.26	-686.88	40°12'07.881"N	104°40'33.265"W	9.71	
6904.00	26.010	356.030	6700.05	-1178.11	-1153.23	-692.80	40°12'08.227"N	104°40'33.341"W	9.73	
7000.00	34.590	359.470	6782.87	-1129.86	-1104.89	-694.51	40°12'08.705"N	104°40'33.363"W	9.12	
7080.00†	41.441	1.812	6845.86	-1080.64	-1055.66	-693.88	40°12'09.192"N	104°40'33.355"W	8.75	SSPG
7095.00	42.730	2.180	6856.99	-1070.59	-1045.61	-693.53	40°12'09.291"N	104°40'33.351"W	8.75	
7190.00	54.340	0.730	6919.79	-999.53	-974.57	-691.81	40°12'09.993"N	104°40'33.329"W	12.27	
7203.00†	55.665	1.282	6927.25	-988.88	-963.92	-691.62	40°12'10.098"N	104°40'33.326"W	10.77	NBRR
7285.00	64.070	4.420	6968.38	-918.05	-893.17	-688.01	40°12'10.797"N	104°40'33.280"W	10.77	
7353.00†	69.343	5.894	6995.27	-855.70	-830.99	-682.38	40°12'11.412"N	104°40'33.207"W	8.01	N470_B_CK
7380.00	71.440	6.450	7004.33	-830.33	-805.71	-679.65	40°12'11.662"N	104°40'33.172"W	8.01	
7409.00†	73.673	5.688	7013.02	-802.74	-778.20	-676.73	40°12'11.933"N	104°40'33.134"W	8.10	N700_C_CK
7476.00	78.840	3.990	7028.93	-737.75	-713.37	-671.25	40°12'12.574"N	104°40'33.064"W	8.10	
7571.00	85.870	2.940	7041.56	-643.68	-619.45	-665.57	40°12'13.502"N	104°40'32.991"W	7.48	
7667.00	91.600	1.510	7043.68	-547.75	-523.59	-661.84	40°12'14.449"N	104°40'32.943"W	6.15	Top of Production
7761.00	90.210	1.080	7042.20	-453.77	-429.62	-659.72	40°12'15.378"N	104°40'32.915"W	1.55	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21)
Area	COLORADO	Well	SKIM STATE 4N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SKIM STATE 4N-21HZ AWB <12782>
Facility	SEC.21-T3N-R65W		

WELLPATH DATA (141 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7857.00	90.520	0.510	7041.59	-357.80	-333.64	-658.39	40°12'16.327"N	104°40'32.898"W	0.68	
7952.00	89.810	0.340	7041.31	-262.84	-238.64	-657.68	40°12'17.265"N	104°40'32.889"W	0.77	
8047.00	89.140	1.340	7042.18	-167.87	-143.65	-656.29	40°12'18.204"N	104°40'32.871"W	1.27	
8142.00	89.780	0.950	7043.08	-72.89	-48.68	-654.39	40°12'19.142"N	104°40'32.847"W	0.79	
8237.00	90.550	0.480	7042.81	22.08	46.31	-653.21	40°12'20.081"N	104°40'32.832"W	0.95	
8332.00	91.230	2.630	7041.33	117.06	141.26	-650.63	40°12'21.019"N	104°40'32.798"W	2.37	
8427.00	90.180	2.250	7040.16	212.05	236.17	-646.59	40°12'21.957"N	104°40'32.746"W	1.18	
8522.00	90.400	1.000	7039.68	307.04	331.12	-643.89	40°12'22.896"N	104°40'32.712"W	1.34	
8618.00	88.920	0.490	7040.25	403.01	427.11	-642.64	40°12'23.844"N	104°40'32.696"W	1.63	
8713.00	87.540	359.940	7043.18	497.91	522.06	-642.29	40°12'24.783"N	104°40'32.691"W	1.56	
8808.00	89.040	0.840	7046.02	592.82	617.01	-641.64	40°12'25.721"N	104°40'32.683"W	1.84	
8903.00	89.170	359.630	7047.50	687.75	712.00	-641.25	40°12'26.659"N	104°40'32.678"W	1.28	
8999.00	89.630	0.030	7048.51	783.67	807.99	-641.54	40°12'27.608"N	104°40'32.681"W	0.63	
9094.00	89.510	359.270	7049.22	878.58	902.99	-642.12	40°12'28.547"N	104°40'32.689"W	0.81	
9190.00	89.780	359.770	7049.82	974.48	998.98	-642.92	40°12'29.495"N	104°40'32.699"W	0.59	
9286.00	90.920	1.750	7049.23	1070.44	1094.97	-641.65	40°12'30.444"N	104°40'32.683"W	2.38	
9381.00	90.430	2.340	7048.11	1165.43	1189.90	-638.26	40°12'31.382"N	104°40'32.639"W	0.81	
9477.00	89.810	2.420	7047.91	1261.43	1285.82	-634.27	40°12'32.330"N	104°40'32.588"W	0.65	
9573.00	88.980	2.600	7048.92	1357.42	1381.72	-630.07	40°12'33.278"N	104°40'32.534"W	0.88	
9763.00	90.730	2.640	7049.40	1547.41	1571.51	-621.38	40°12'35.153"N	104°40'32.422"W	0.92	
9859.00	90.090	2.520	7048.72	1643.40	1667.41	-617.06	40°12'36.101"N	104°40'32.366"W	0.68	
9954.00	89.930	1.190	7048.70	1738.40	1762.36	-613.99	40°12'37.039"N	104°40'32.327"W	1.41	
10050.00	90.000	0.610	7048.76	1834.38	1858.35	-612.48	40°12'37.988"N	104°40'32.307"W	0.61	
10145.00	88.700	0.840	7049.84	1929.34	1953.33	-611.28	40°12'38.926"N	104°40'32.292"W	1.39	
10240.00	89.290	0.690	7051.50	2024.30	2048.31	-610.01	40°12'39.865"N	104°40'32.275"W	0.64	
10336.00	89.260	0.790	7052.72	2120.26	2144.29	-608.77	40°12'40.813"N	104°40'32.259"W	0.11	
10431.00	91.070	0.530	7052.44	2215.23	2239.28	-607.67	40°12'41.752"N	104°40'32.245"W	1.92	
10526.00	91.070	2.380	7050.67	2310.20	2334.23	-605.26	40°12'42.690"N	104°40'32.214"W	1.95	
10621.00	90.460	1.820	7049.40	2405.19	2429.16	-601.78	40°12'43.628"N	104°40'32.170"W	0.87	
10716.00	89.290	359.520	7049.61	2500.15	2524.14	-600.67	40°12'44.567"N	104°40'32.155"W	2.72	
10812.00	89.170	359.510	7050.90	2596.04	2620.13	-601.48	40°12'45.516"N	104°40'32.166"W	0.13	
10907.00	90.620	0.750	7051.07	2690.98	2715.12	-601.27	40°12'46.454"N	104°40'32.163"W	2.01	
11002.00	88.770	1.600	7051.58	2785.96	2810.10	-599.32	40°12'47.393"N	104°40'32.138"W	2.14	
11097.00	88.830	3.630	7053.57	2880.93	2904.97	-594.99	40°12'48.330"N	104°40'32.082"W	2.14	
11193.00	89.290	3.110	7055.14	2976.90	3000.79	-589.34	40°12'49.277"N	104°40'32.009"W	0.72	
11288.00	89.630	3.820	7056.04	3071.87	3095.61	-583.60	40°12'50.214"N	104°40'31.935"W	0.83	
11383.00	89.000	4.980	7057.17	3166.78	3190.33	-576.32	40°12'51.150"N	104°40'31.841"W	1.39	
11478.00	88.980	3.740	7058.85	3261.69	3285.03	-569.09	40°12'52.086"N	104°40'31.748"W	1.31	
11573.00	90.920	6.070	7058.93	3356.57	3379.68	-560.97	40°12'53.021"N	104°40'31.644"W	3.19	
11668.00	91.170	5.050	7057.20	3451.38	3474.21	-551.77	40°12'53.956"N	104°40'31.525"W	1.11	
11763.00	91.230	5.230	7055.21	3546.23	3568.81	-543.26	40°12'54.890"N	104°40'31.416"W	0.20	
11858.00	91.790	5.970	7052.71	3641.02	3663.32	-533.99	40°12'55.824"N	104°40'31.296"W	0.98	
11954.00	90.250	6.140	7051.00	3736.78	3758.77	-523.87	40°12'56.768"N	104°40'31.166"W	1.61	
12049.00	90.650	5.810	7050.25	3831.56	3853.25	-513.98	40°12'57.701"N	104°40'31.038"W	0.55	
12144.00	90.400	5.200	7049.38	3926.39	3947.81	-504.87	40°12'58.636"N	104°40'30.921"W	0.69	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21)
Area	COLORADO	Well	SKIM STATE 4N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SKIM STATE 4N-21HZ AWB <12782>
Facility	SEC.21-T3N-R65W		

WELLPATH DATA (141 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12239.00	91.260	5.000	7048.00	4021.25	4042.42	-496.42	40°12'59.571"N	104°40'30.812"W	0.93	
12335.00	90.000	3.520	7046.95	4117.17	4138.14	-489.29	40°13'00.517"N	104°40'30.720"W	2.02	
12430.00	90.520	2.980	7046.52	4212.15	4232.99	-483.91	40°13'01.454"N	104°40'30.651"W	0.79	
12620.00	90.920	1.570	7044.13	4402.13	4422.82	-476.37	40°13'03.330"N	104°40'30.553"W	0.77	
12731.00	90.550	0.730	7042.71	4513.11	4533.79	-474.14	40°13'04.426"N	104°40'30.525"W	0.83	Last BHI MWD+IFR Surveys
12782.00	90.550	0.730	7042.22	4564.09	4584.78	-473.49	40°13'04.930"N	104°40'30.516"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: SKIM STATE 4N-21HZ AWB <12782> Ref Wellpath: SKIM STATE 4N-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	16.00	1231.00	1215.00	16.00	1216.29	0.00	0.00	-127.04	-68.51
9.625in Casing Surface	16.00	1221.00	1205.00	16.00	1206.70	0.00	0.00	-124.58	-67.11
7.875in Open Hole	1231.00	12782.00	11551.00	1216.29	7042.22	-127.04	-68.51	4584.78	-473.49

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.21-T3N-R65W LINES	18.00	-1065.10	2588.02	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon
SEC.28-T3N-R65W LINES	18.00	-1065.10	2588.02	1734184.18	14600660.39	40°12'09.097"N	104°39'51.059"W	polygon
SKIM 4N-21HZ LANDBOX	6982.00	0.00	0.00	1731593.28	14601715.54	40°12'19.624"N	104°40'24.413"W	polygon
SKIM STATE 4N-21HZ BHL ON PLAT (50'FNL & 742'FWL, SEC.21) REV-1	6982.00	4583.63	-461.64	1731114.97	14606295.64	40°13'04.919"N	104°40'30.364"W	point
SKIM STATE 4N-21HZ BHL ON PLAT (50'FNL & 742'FWL, SEC.21) REV-2	7047.00	4583.63	-461.64	1731114.97	14606295.65	40°13'04.919"N	104°40'30.364"W	point

WELLPATH COMPOSITION - Ref Wellbore: SKIM STATE 4N-21HZ AWB <12782> Ref Wellpath: SKIM STATE 4N-21HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1188.00	Custom APC_ISCWSA REV 2 MWD	CATHEDRAL ENERGY MWD SURVEYS <95-1188>	SKIM STATE 4N-21HZ AWB <12782>
1188.00	12731.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHI MWD+IFR SURVEYS 7 7/8" HOLE <1291-12731>	SKIM STATE 4N-21HZ AWB <12782>
12731.00	12782.00	Blind Drilling (std)	Projection to bit	SKIM STATE 4N-21HZ AWB <12782>

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#44 SKIM STATE 4N-21HZ (639'FSL & 1241'FWL, SEC.21)
Area	COLORADO	Well	SKIM STATE 4N-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SKIM STATE 4N-21HZ AWB <12782>
Facility	SEC.21-T3N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	120.800	16.00	Tie-On
95.00	0.100	120.800	95.00	Begin CATHEDRAL MWD Surveys
1188.00	16.300	208.600	1175.03	Tie-Into CATHEDRAL MWD Surveys
1291.00	16.660	211.410	1273.80	Begin BHI MWD+IFR Surveys
7080.00	41.441	1.812	6845.86	SSPG
7203.00	55.665	1.282	6927.25	NBRR
7353.00	69.343	5.894	6995.27	N470_B_CK
7409.00	73.673	5.688	7013.02	N700_C_CK
7667.00	91.600	1.510	7043.68	Top of Production
12731.00	90.550	0.730	7042.71	Last BHI MWD+IFR Surveys
12782.00	90.550	0.730	7042.22	Projection to Bit