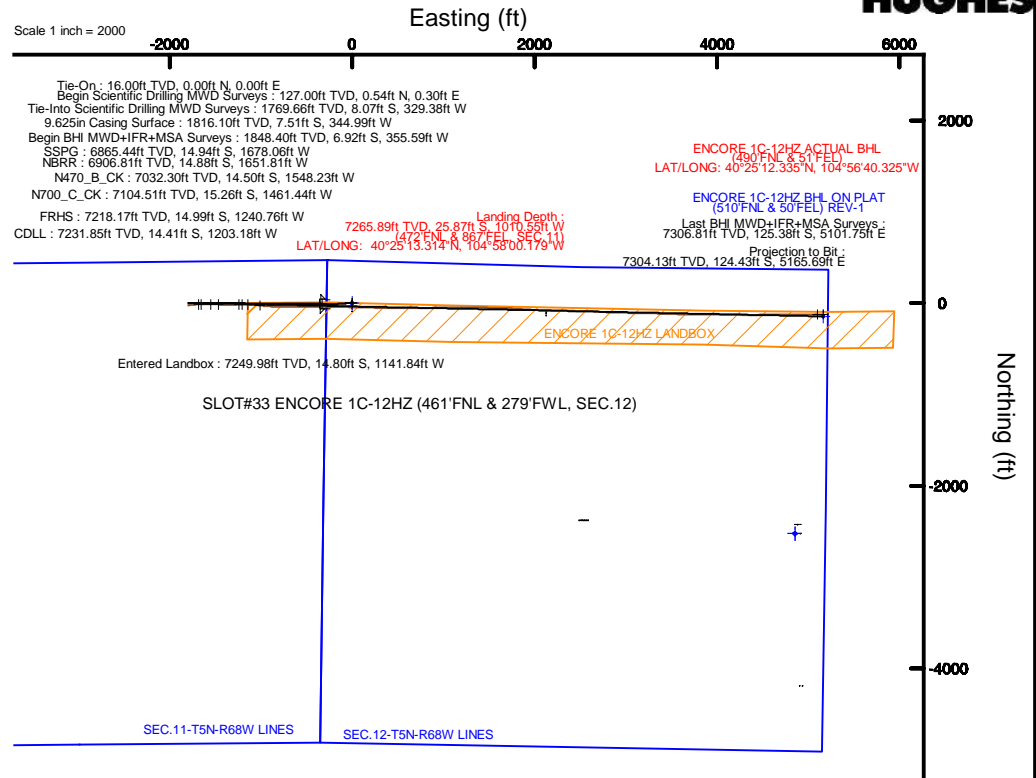
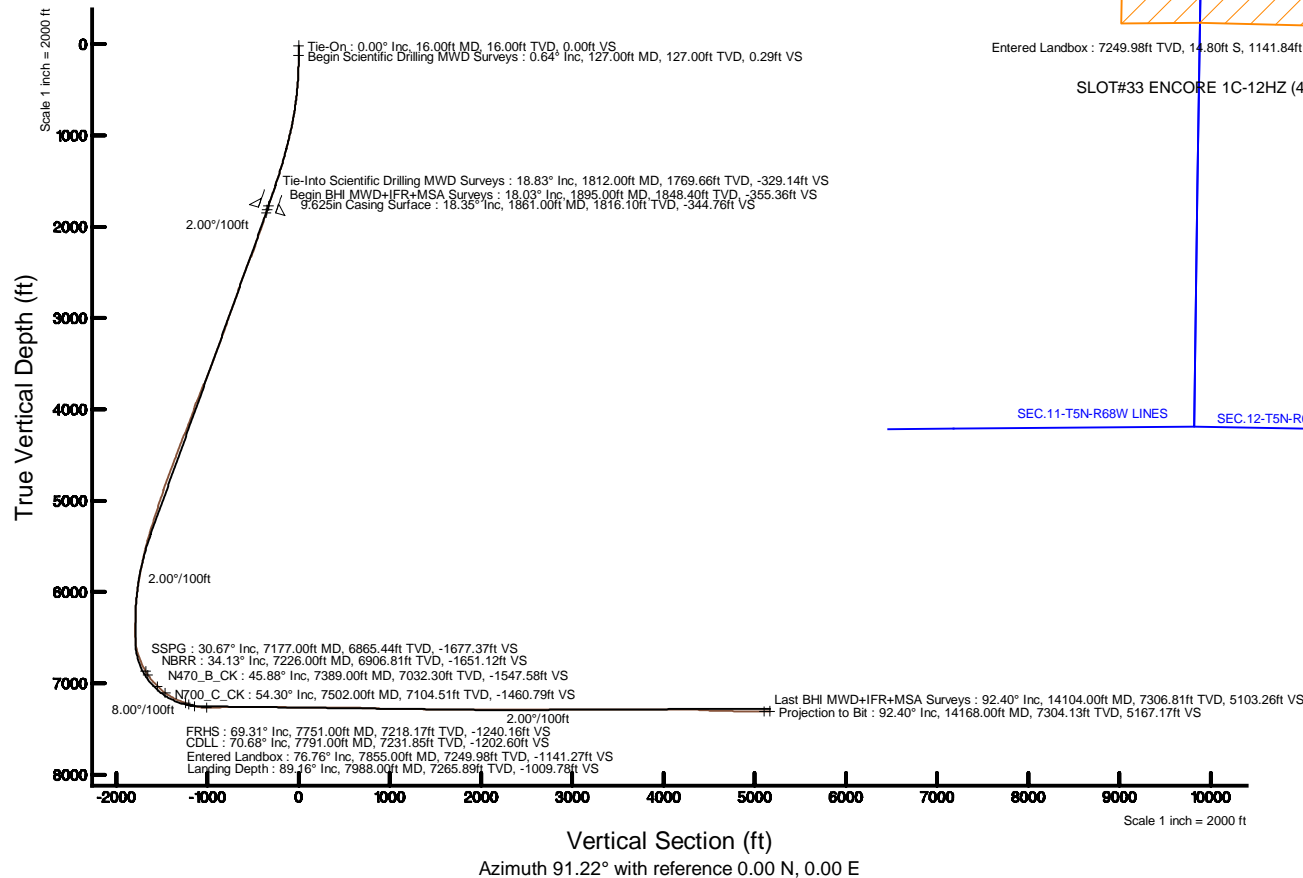


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)  
 Field: LARIMER COUNTY Well: ENCORE 1C-12HZ  
 Facility: SEC.12-T5N-R68W Wellbore: ENCORE 1C-12HZ PWB



Plot reference wellpath is ENCORE 1C-12HZ (REV-A.0) PWP	
True vertical depths are referenced to XTREME 23 (16'KB) (RKB)	Grid System: NAD83 / UTM Zone 13 North, US feet
Measured depths are referenced to XTREME 23 (16'KB) (RKB)	North Reference: True north
XTREME 23 (16'KB) (RKB) to Mean Sea Level: 5006 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precin on 8/25/2015



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 1C-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 1C-12HZ AWB <14168>
Facility	SEC.12-T5N-R68W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Precain
Scale	0.9996	Report Generated	8/25/2015 at 8:39:24 AM
Convergence at slot	0.02° East	Database/Source file	WellArchitectAPC/ENCORE_1C-12HZ_AWB__14168_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2424.99	-4915.82	1650690.52	14679838.97	40°25'13.570"N	104°57'47.113"W
Facility Reference Pt			1655605.86	14677417.99	40°24'49.612"N	104°56'43.555"W
Field Reference Pt			0.00	0.00	0°00'00.000"	109°29'19.478"W

## WELLPATH DATUM

Calculation method	Minimum curvature	XTREME 23 (16'KB) (RKB) to Facility Vertical Datum	5006.00ft
Horizontal Reference Pt	Slot	XTREME 23 (16'KB) (RKB) to Mean Sea Level	5006.00ft
Vertical Reference Pt	XTREME 23 (16'KB) (RKB)	XTREME 23 (16'KB) (RKB) to Mud Line at Slot (SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12))	5006.00ft
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	91.22°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 1C-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 1C-12HZ AWB <14168>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (155 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	28.700	0.00	0.00	0.00	0.00	40°25'13.570"N	104°57'47.113"W	0.00	
16.00	0.000	28.700	16.00	0.00	0.00	0.00	40°25'13.570"N	104°57'47.113"W	0.00	Tie-On
127.00	0.640	28.700	127.00	0.29	0.54	0.30	40°25'13.575"N	104°57'47.109"W	0.58	Begin Scientific Drilling MWD Surveys
219.00	0.950	318.650	218.99	0.01	1.57	0.04	40°25'13.585"N	104°57'47.112"W	1.03	
307.00	2.340	281.110	306.95	-2.26	2.46	-2.20	40°25'13.594"N	104°57'47.142"W	1.92	
434.00	4.370	260.860	433.73	-9.57	2.19	-9.53	40°25'13.592"N	104°57'47.236"W	1.83	
529.00	5.890	265.450	528.35	-17.98	1.23	-17.96	40°25'13.582"N	104°57'47.345"W	1.66	
625.00	7.750	269.180	623.67	-29.35	0.75	-29.34	40°25'13.577"N	104°57'47.492"W	1.99	
719.00	8.400	266.510	716.74	-42.53	0.24	-42.53	40°25'13.572"N	104°57'47.663"W	0.80	
814.00	10.220	266.330	810.48	-57.84	-0.72	-57.87	40°25'13.563"N	104°57'47.861"W	1.92	
972.00	13.130	267.330	965.20	-89.72	-2.46	-89.79	40°25'13.546"N	104°57'48.274"W	1.85	
1067.00	13.510	265.660	1057.64	-111.53	-3.80	-111.64	40°25'13.532"N	104°57'48.556"W	0.57	
1162.00	14.400	264.320	1149.84	-134.30	-5.81	-134.46	40°25'13.513"N	104°57'48.851"W	1.00	
1257.00	15.900	262.970	1241.53	-158.91	-8.57	-159.13	40°25'13.485"N	104°57'49.170"W	1.62	
1383.00	17.160	269.410	1362.33	-194.57	-10.87	-194.85	40°25'13.463"N	104°57'49.632"W	1.76	
1478.00	17.750	271.020	1452.96	-223.06	-10.76	-223.34	40°25'13.464"N	104°57'50.001"W	0.80	
1573.00	18.110	271.100	1543.34	-252.31	-10.22	-252.58	40°25'13.469"N	104°57'50.379"W	0.38	
1668.00	19.060	271.930	1633.39	-282.58	-9.41	-282.85	40°25'13.477"N	104°57'50.770"W	1.04	
1764.00	18.740	271.540	1724.21	-313.68	-8.47	-313.93	40°25'13.486"N	104°57'51.172"W	0.36	
1812.00	18.830	271.430	1769.66	-329.14	-8.07	-329.38	40°25'13.490"N	104°57'51.372"W	0.20	Tie-Into Scientific Drilling MWD Surveys
1895.00	18.030	273.660	1848.40	-355.36	-6.92	-355.59	40°25'13.502"N	104°57'51.711"W	1.28	Begin BHI MWD+IFR+MSA Surveys
1990.00	17.380	271.850	1938.90	-384.24	-5.52	-384.45	40°25'13.515"N	104°57'52.084"W	0.90	
2085.00	18.530	272.980	2029.27	-413.52	-4.28	-413.70	40°25'13.528"N	104°57'52.462"W	1.26	
2180.00	20.180	270.670	2118.90	-444.99	-3.30	-445.17	40°25'13.537"N	104°57'52.869"W	1.91	
2275.00	19.310	268.750	2208.32	-477.07	-3.45	-477.25	40°25'13.536"N	104°57'53.284"W	1.14	
2370.00	21.450	269.770	2297.36	-510.14	-3.86	-510.33	40°25'13.532"N	104°57'53.711"W	2.28	
2465.00	21.830	269.470	2385.67	-545.16	-4.10	-545.37	40°25'13.529"N	104°57'54.164"W	0.42	
2560.00	21.780	268.840	2473.87	-580.42	-4.62	-580.65	40°25'13.524"N	104°57'54.620"W	0.25	
2656.00	19.950	268.100	2563.57	-614.57	-5.52	-614.83	40°25'13.515"N	104°57'55.062"W	1.93	
2751.00	18.430	268.620	2653.29	-645.76	-6.42	-646.04	40°25'13.506"N	104°57'55.466"W	1.61	
2847.00	20.170	270.870	2743.89	-677.47	-6.53	-677.76	40°25'13.505"N	104°57'55.876"W	1.97	
2942.00	18.670	270.140	2833.49	-709.05	-6.25	-709.35	40°25'13.508"N	104°57'56.284"W	1.60	
3037.00	20.060	267.050	2923.11	-740.51	-7.05	-740.82	40°25'13.500"N	104°57'56.691"W	1.82	
3132.00	18.700	265.000	3012.73	-771.90	-9.22	-772.27	40°25'13.479"N	104°57'57.098"W	1.60	
3228.00	20.300	267.070	3103.22	-803.81	-11.41	-804.23	40°25'13.457"N	104°57'57.511"W	1.82	
3323.00	20.110	266.420	3192.37	-836.52	-13.27	-836.99	40°25'13.439"N	104°57'57.935"W	0.31	
3419.00	19.250	266.060	3282.77	-868.73	-15.39	-869.25	40°25'13.418"N	104°57'58.352"W	0.90	
3514.00	19.320	266.700	3372.43	-899.99	-17.37	-900.56	40°25'13.398"N	104°57'58.757"W	0.23	
3609.00	20.110	268.180	3461.87	-931.97	-18.79	-932.58	40°25'13.384"N	104°57'59.171"W	0.98	
3705.00	21.110	272.450	3551.73	-965.73	-18.58	-966.35	40°25'13.386"N	104°57'59.607"W	1.88	
3800.00	23.120	275.000	3639.73	-1001.45	-16.22	-1002.02	40°25'13.410"N	104°58'00.068"W	2.34	
3895.00	23.290	274.150	3727.05	-1038.82	-13.24	-1039.33	40°25'13.439"N	104°58'00.551"W	0.40	
3991.00	23.230	273.870	3815.25	-1076.68	-10.58	-1077.15	40°25'13.465"N	104°58'01.040"W	0.13	
4086.00	21.160	271.820	3903.20	-1112.55	-8.78	-1112.99	40°25'13.483"N	104°58'01.503"W	2.33	
4181.00	19.810	266.740	3992.20	-1145.75	-9.15	-1146.20	40°25'13.479"N	104°58'01.933"W	2.35	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 1C-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 1C-12HZ AWB <14168>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (155 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4277.00	20.420	268.750	4082.35	-1178.70	-10.44	-1179.18	40°25'13.467"N	104°58'02.359"W	0.96	
4372.00	20.780	270.920	4171.27	-1212.11	-10.53	-1212.60	40°25'13.466"N	104°58'02.791"W	0.89	
4466.00	21.100	272.410	4259.07	-1245.70	-9.55	-1246.18	40°25'13.475"N	104°58'03.225"W	0.66	
4562.00	21.010	273.460	4348.66	-1280.17	-7.78	-1280.62	40°25'13.493"N	104°58'03.671"W	0.40	
4657.00	20.760	274.780	4437.42	-1313.99	-5.35	-1314.40	40°25'13.517"N	104°58'04.107"W	0.56	
4751.00	20.030	272.500	4525.52	-1346.71	-3.26	-1347.09	40°25'13.537"N	104°58'04.530"W	1.15	
4847.00	21.260	273.240	4615.36	-1380.55	-1.56	-1380.89	40°25'13.554"N	104°58'04.967"W	1.31	
4942.00	20.980	271.930	4703.98	-1414.76	-0.02	-1415.08	40°25'13.569"N	104°58'05.409"W	0.58	
5037.00	20.280	269.160	4792.89	-1448.22	0.32	-1448.54	40°25'13.573"N	104°58'05.842"W	1.26	
5132.00	18.810	269.110	4882.41	-1479.98	-0.16	-1480.32	40°25'13.568"N	104°58'06.253"W	1.55	
5228.00	18.140	269.410	4973.46	-1510.39	-0.56	-1510.74	40°25'13.564"N	104°58'06.646"W	0.70	
5323.00	17.610	270.920	5063.88	-1539.54	-0.48	-1539.90	40°25'13.565"N	104°58'07.023"W	0.74	
5418.00	18.210	271.080	5154.27	-1568.75	0.03	-1569.11	40°25'13.570"N	104°58'07.400"W	0.63	
5513.00	18.330	275.300	5244.49	-1598.50	1.69	-1598.82	40°25'13.586"N	104°58'07.785"W	1.40	
5609.00	16.900	273.020	5335.98	-1627.51	3.82	-1627.79	40°25'13.607"N	104°58'08.159"W	1.65	
5704.00	15.340	270.370	5427.25	-1653.87	4.63	-1654.15	40°25'13.615"N	104°58'08.500"W	1.82	
5799.00	14.050	271.980	5519.14	-1677.97	5.11	-1678.24	40°25'13.620"N	104°58'08.811"W	1.42	
5893.00	11.300	267.870	5610.84	-1698.58	5.16	-1698.85	40°25'13.620"N	104°58'09.078"W	3.08	
5988.00	11.920	265.000	5703.90	-1717.62	3.96	-1717.93	40°25'13.609"N	104°58'09.325"W	0.89	
6084.00	11.280	258.590	5797.94	-1736.64	1.24	-1737.01	40°25'13.582"N	104°58'09.571"W	1.50	
6179.00	10.000	250.860	5891.31	-1753.44	-3.30	-1753.91	40°25'13.537"N	104°58'09.790"W	2.02	
6274.00	8.830	243.110	5985.03	-1767.61	-9.31	-1768.20	40°25'13.477"N	104°58'09.975"W	1.81	
6368.00	5.900	237.570	6078.25	-1778.00	-15.16	-1778.72	40°25'13.420"N	104°58'10.111"W	3.20	
6464.00	4.070	226.200	6173.88	-1784.51	-20.17	-1785.34	40°25'13.370"N	104°58'10.196"W	2.16	
6559.00	1.810	240.040	6268.75	-1788.18	-23.25	-1789.08	40°25'13.340"N	104°58'10.244"W	2.48	
6654.00	1.240	305.350	6363.72	-1790.31	-23.40	-1791.22	40°25'13.338"N	104°58'10.272"W	1.80	
6749.00	1.150	53.680	6458.71	-1790.41	-22.24	-1791.29	40°25'13.350"N	104°58'10.273"W	2.04	
6844.00	4.500	72.790	6553.59	-1786.12	-20.58	-1786.96	40°25'13.366"N	104°58'10.217"W	3.61	
6940.00	15.430	86.650	6648.00	-1769.76	-18.71	-1770.56	40°25'13.384"N	104°58'10.005"W	11.58	
7035.00	21.810	85.950	6737.98	-1739.56	-16.72	-1740.31	40°25'13.404"N	104°58'09.614"W	6.72	
7130.00	27.350	89.180	6824.35	-1700.15	-15.16	-1700.85	40°25'13.420"N	104°58'09.104"W	6.00	
7177.00†	30.669	89.660	6865.44	-1677.37	-14.94	-1678.06	40°25'13.422"N	104°58'08.809"W	7.08	SSPG
7226.00	34.130	90.070	6906.81	-1651.12	-14.88	-1651.81	40°25'13.422"N	104°58'08.470"W	7.08	NBRR
7321.00	40.040	89.490	6982.56	-1593.88	-14.64	-1594.55	40°25'13.425"N	104°58'07.729"W	6.23	
7389.00†	45.880	90.123	7032.30	-1547.58	-14.50	-1548.23	40°25'13.426"N	104°58'07.131"W	8.61	N470_B_CK
7416.00	48.200	90.340	7050.70	-1527.82	-14.58	-1528.47	40°25'13.425"N	104°58'06.875"W	8.61	
7502.00†	54.301	90.806	7104.51	-1460.79	-15.26	-1461.44	40°25'13.419"N	104°58'06.008"W	7.11	N700_C_CK
7511.00	54.940	90.850	7109.72	-1453.45	-15.37	-1454.10	40°25'13.418"N	104°58'05.913"W	7.11	
7606.00	62.020	89.830	7159.35	-1372.53	-15.82	-1373.17	40°25'13.413"N	104°58'04.867"W	7.51	
7702.00	67.620	89.650	7200.18	-1285.71	-15.42	-1286.33	40°25'13.417"N	104°58'03.744"W	5.84	
7751.00†	69.306	89.264	7218.17	-1240.16	-14.99	-1240.76	40°25'13.422"N	104°58'03.155"W	3.52	FRHS
7791.00†	70.683	88.956	7231.85	-1202.60	-14.41	-1203.18	40°25'13.427"N	104°58'02.669"W	3.52	CDLL
7797.00	70.890	88.910	7233.83	-1196.94	-14.30	-1197.51	40°25'13.428"N	104°58'02.596"W	3.52	
7893.00	80.620	94.060	7257.44	-1104.04	-16.80	-1104.64	40°25'13.404"N	104°58'01.395"W	11.39	
7988.00	89.160	96.930	7265.89	-1009.78	-25.87	-1010.55	40°25'13.314"N	104°58'00.179"W	9.48	Landing Depth

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 1C-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 1C-12HZ AWB <14168>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (155 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8084.00	92.550	94.020	7264.46	-914.08	-35.02	-915.03	40°25'13.224"N	104°57'58.944"W	4.65	
8179.00	92.050	91.660	7260.65	-819.20	-39.72	-820.23	40°25'13.177"N	104°57'57.718"W	2.54	
8274.00	90.830	90.620	7258.26	-724.23	-41.61	-725.28	40°25'13.159"N	104°57'56.490"W	1.69	
8369.00	89.720	89.120	7257.80	-629.26	-41.40	-630.28	40°25'13.161"N	104°57'55.262"W	1.96	
8464.00	90.510	89.940	7257.61	-534.31	-40.62	-535.29	40°25'13.169"N	104°57'54.034"W	1.20	
8560.00	90.610	89.710	7256.67	-438.34	-40.33	-439.29	40°25'13.171"N	104°57'52.793"W	0.26	
8655.00	88.080	90.130	7257.76	-343.38	-40.19	-344.31	40°25'13.173"N	104°57'51.565"W	2.70	
8750.00	88.700	90.090	7260.43	-248.43	-40.38	-249.35	40°25'13.171"N	104°57'50.337"W	0.65	
8845.00	89.620	90.300	7261.82	-153.46	-40.70	-154.36	40°25'13.168"N	104°57'49.109"W	0.99	
8941.00	89.260	91.900	7262.76	-57.47	-42.54	-58.38	40°25'13.150"N	104°57'47.868"W	1.71	
9036.00	88.890	91.090	7264.29	37.52	-45.02	36.57	40°25'13.125"N	104°57'46.640"W	0.94	
9130.00	89.350	91.290	7265.74	131.51	-46.97	130.54	40°25'13.106"N	104°57'45.425"W	0.53	
9225.00	90.240	91.980	7266.08	226.50	-49.68	225.50	40°25'13.079"N	104°57'44.197"W	1.19	
9320.00	90.700	91.200	7265.30	321.50	-52.32	320.46	40°25'13.053"N	104°57'42.970"W	0.95	
9415.00	89.320	91.400	7265.28	416.49	-54.47	415.43	40°25'13.032"N	104°57'41.742"W	1.47	
9510.00	88.880	89.420	7266.77	511.47	-55.15	510.41	40°25'13.025"N	104°57'40.514"W	2.13	
9606.00	89.590	88.860	7268.06	607.39	-53.71	606.39	40°25'13.039"N	104°57'39.273"W	0.94	
9701.00	89.100	89.600	7269.14	702.33	-52.44	701.38	40°25'13.052"N	104°57'38.045"W	0.93	
9796.00	87.310	89.280	7272.12	797.23	-51.51	796.32	40°25'13.061"N	104°57'36.817"W	1.91	
9892.00	87.870	89.340	7276.15	893.10	-50.35	892.23	40°25'13.072"N	104°57'35.577"W	0.59	
9987.00	88.510	89.730	7279.15	988.01	-49.58	987.18	40°25'13.080"N	104°57'34.350"W	0.79	
10082.00	89.470	89.460	7280.83	1082.95	-48.91	1082.16	40°25'13.086"N	104°57'33.121"W	1.05	
10177.00	90.700	89.540	7280.69	1177.91	-48.08	1177.15	40°25'13.095"N	104°57'31.893"W	1.30	
10273.00	89.070	89.930	7280.88	1273.87	-47.64	1273.15	40°25'13.099"N	104°57'30.652"W	1.75	
10368.00	88.140	90.980	7283.19	1368.83	-48.39	1368.11	40°25'13.091"N	104°57'29.424"W	1.48	
10463.00	88.820	90.890	7285.71	1463.80	-49.94	1463.07	40°25'13.076"N	104°57'28.197"W	0.72	
10558.00	90.120	90.550	7286.59	1558.79	-51.14	1558.05	40°25'13.064"N	104°57'26.969"W	1.41	
10653.00	90.950	91.970	7285.70	1653.78	-53.22	1653.02	40°25'13.044"N	104°57'25.741"W	1.73	
10749.00	88.180	92.970	7286.43	1749.75	-57.36	1748.92	40°25'13.003"N	104°57'24.501"W	3.07	
10844.00	88.880	93.350	7288.87	1844.66	-62.60	1843.74	40°25'12.951"N	104°57'23.275"W	0.84	
10939.00	90.610	94.410	7289.29	1939.55	-69.02	1938.52	40°25'12.887"N	104°57'22.049"W	2.14	
11034.00	92.120	92.290	7287.03	2034.45	-74.57	2033.32	40°25'12.832"N	104°57'20.824"W	2.74	
11129.00	91.070	90.980	7284.39	2129.41	-77.28	2128.24	40°25'12.805"N	104°57'19.596"W	1.77	
11224.00	88.670	91.650	7284.60	2224.40	-79.46	2223.21	40°25'12.784"N	104°57'18.369"W	2.62	
11319.00	90.020	91.470	7285.69	2319.39	-82.05	2318.17	40°25'12.758"N	104°57'17.141"W	1.43	
11414.00	89.320	91.440	7286.23	2414.39	-84.46	2413.14	40°25'12.734"N	104°57'15.913"W	0.74	
11509.00	90.790	91.240	7286.14	2509.38	-86.68	2508.11	40°25'12.712"N	104°57'14.685"W	1.56	
11605.00	89.690	92.920	7285.74	2605.37	-90.17	2604.04	40°25'12.678"N	104°57'13.445"W	2.09	
11700.00	90.150	93.020	7285.87	2700.32	-95.09	2698.91	40°25'12.629"N	104°57'12.218"W	0.50	
11795.00	89.960	92.490	7285.78	2795.29	-99.66	2793.80	40°25'12.584"N	104°57'10.991"W	0.59	
11890.00	89.840	91.960	7285.95	2890.27	-103.34	2888.73	40°25'12.547"N	104°57'09.764"W	0.57	
11985.00	89.190	91.100	7286.75	2985.26	-105.88	2983.69	40°25'12.522"N	104°57'08.536"W	1.13	
12080.00	90.790	90.420	7286.77	3080.26	-107.14	3078.68	40°25'12.509"N	104°57'07.308"W	1.83	
12175.00	88.920	91.320	7287.01	3175.25	-108.58	3173.66	40°25'12.495"N	104°57'06.080"W	2.18	
12270.00	89.870	91.740	7288.01	3270.24	-111.12	3268.62	40°25'12.470"N	104°57'04.852"W	1.09	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 1C-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 1C-12HZ AWB <14168>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (155 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12365.00	89.680	91.950	7288.39	3365.24	-114.18	3363.57	40°25'12.439"N	104°57'03.625"W	0.30	
12461.00	89.590	91.620	7289.00	3461.23	-117.17	3459.52	40°25'12.410"N	104°57'02.384"W	0.36	
12556.00	89.960	91.710	7289.37	3556.23	-119.93	3554.48	40°25'12.382"N	104°57'01.156"W	0.40	
12650.00	90.890	90.540	7288.67	3650.22	-121.77	3648.46	40°25'12.364"N	104°56'59.941"W	1.59	
12745.00	90.760	89.740	7287.31	3745.19	-122.01	3743.45	40°25'12.362"N	104°56'58.713"W	0.85	
12841.00	89.960	89.720	7286.70	3841.16	-121.55	3839.44	40°25'12.366"N	104°56'57.472"W	0.83	
12935.00	90.700	90.210	7286.16	3935.13	-121.50	3933.44	40°25'12.366"N	104°56'56.257"W	0.94	
13030.00	90.020	90.930	7285.56	4030.12	-122.44	4028.43	40°25'12.357"N	104°56'55.029"W	1.04	
13125.00	91.010	91.380	7284.71	4125.12	-124.36	4123.41	40°25'12.338"N	104°56'53.801"W	1.14	
13220.00	89.320	91.340	7284.44	4220.11	-126.61	4218.38	40°25'12.315"N	104°56'52.573"W	1.78	
13315.00	88.480	90.380	7286.26	4315.09	-128.04	4313.35	40°25'12.301"N	104°56'51.345"W	1.34	
13411.00	85.150	89.510	7291.59	4410.91	-127.94	4409.18	40°25'12.302"N	104°56'50.106"W	3.58	
13506.00	87.870	89.560	7297.38	4505.68	-127.18	4504.00	40°25'12.309"N	104°56'48.880"W	2.86	
13602.00	89.650	90.020	7299.45	4601.62	-126.82	4599.97	40°25'12.313"N	104°56'47.639"W	1.92	
13697.00	88.020	89.650	7301.38	4696.57	-126.55	4694.95	40°25'12.315"N	104°56'46.411"W	1.76	
13793.00	87.340	90.160	7305.27	4792.47	-126.39	4790.87	40°25'12.316"N	104°56'45.171"W	0.89	
13888.00	88.670	90.260	7308.58	4887.39	-126.74	4885.81	40°25'12.313"N	104°56'43.943"W	1.40	
13983.00	90.180	89.640	7309.53	4982.36	-126.66	4980.80	40°25'12.313"N	104°56'42.715"W	1.72	
14104.00	92.400	89.150	7306.81	5103.26	-125.38	5101.75	40°25'12.326"N	104°56'41.151"W	1.88	Last BHI MWD+IFR+MSA Surveys
14168.00	92.400	89.150	7304.13	5167.17	-124.43	5165.69	40°25'12.335"N	104°56'40.325"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: ENCORE 1C-12HZ AWB <14168>      Ref Wellpath: ENCORE 1C-12HZ 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	1871.00	1855.00	16.00	1825.59	0.00	0.00	-7.35	-348.13
9.625in Casing Surface	16.00	1861.00	1845.00	16.00	1816.10	0.00	0.00	-7.51	-344.99
8.5in Open Hole	1871.00	14168.00	12297.00	1825.59	7304.13	-7.35	-348.13	-124.43	5165.69

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.11-T5N-R68W LINES	42.00	-2522.79	4856.16	1655545.78	14677319.22	40°24'48.636"N	104°56'44.333"W	polygon
SEC.12-T5N-R68W LINES	42.00	-2522.79	4856.16	1655545.78	14677319.22	40°24'48.636"N	104°56'44.333"W	polygon
ENCORE 1C-12HZ BHL ON PLAT (510'FNL & 50'FEL) REV-1	7277.00	-144.86	5166.98	1655855.49	14679696.33	40°25'12.133"N	104°56'40.308"W	point
ENCORE 1C-12HZ LANDBOX	7277.00	0.00	0.00	1650690.52	14679838.97	40°25'13.570"N	104°57'47.113"W	polygon



Actual Wellpath Report  
ENCORE 1C-12HZ AWP  
Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 1C-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 1C-12HZ AWB <14168>
Facility	SEC.12-T5N-R68W		

WELLPATH COMPOSITION - Ref Wellbore: ENCORE 1C-12HZ AWB <14168>				Ref Wellpath: ENCORE 1C-12HZ AWP
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1812.00	Custom_APC_ISCWSA REV 2 MWD	SCIENTIFIC DRILLING MWD SURVEYS <127-1812>	ENCORE 1C-12HZ AWB <14168>
1812.00	14104.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHI MWD+IFR+MSA 8 1/2" HOLE <1895-14104>	ENCORE 1C-12HZ AWB <14168>
14104.00	14168.00	Blind Drilling (std)	Projection to bit	ENCORE 1C-12HZ AWB <14168>



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#33 ENCORE 1C-12HZ (461'FNL & 279'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 1C-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 1C-12HZ AWB <14168>
Facility	SEC.12-T5N-R68W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	28.700	16.00	Tie-On
127.00	0.640	28.700	127.00	Begin Scientific Drilling MWD Surveys
1812.00	18.830	271.430	1769.66	Tie-Into Scientific Drilling MWD Surveys
1895.00	18.030	273.660	1848.40	Begin BHI MWD+IFR+MSA Surveys
7177.00	30.669	89.660	6865.44	SSPG
7226.00	34.130	90.070	6906.81	NBRR
7389.00	45.880	90.123	7032.30	N470_B_CK
7502.00	54.301	90.806	7104.51	N700_C_CK
7751.00	69.306	89.264	7218.17	FRHS
7791.00	70.683	88.956	7231.85	CDLL
7988.00	89.160	96.930	7265.89	Landing Depth
14104.00	92.400	89.150	7306.81	Last BHI MWD+IFR+MSA Surveys
14168.00	92.400	89.150	7304.13	Projection to Bit