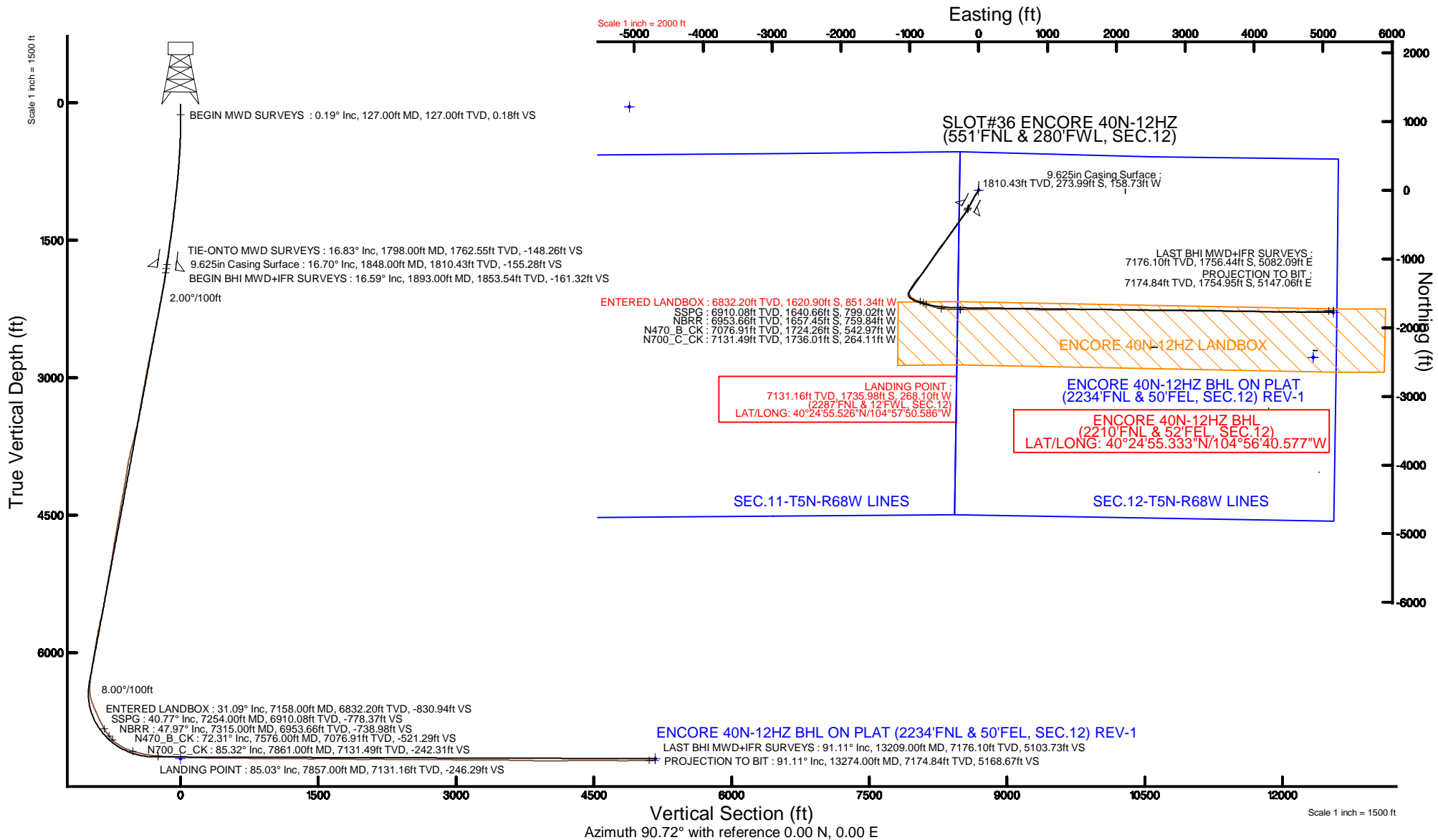


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)
 Field: LARIMER COUNTY Well: ENCORE 40N-12HZ
 Facility: SEC.12-T5N-R68W Wellbore: ENCORE 40N-12HZ PWB

Plot reference wellpath is ENCORE 40N-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#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: amarcas on 04/Sep/2015





Actual Wellpath Report

ENCORE 40N-12HZ AWP

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 40N-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 40N-12HZ AWB <13274>
Facility	SEC.12-T5N-R68W		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Amarcar
Scale	0.9996	Report Generated	04/Sep/2015 at 08:26
Convergence at slot	0.02° East	Database/Source file	MAP CHECK./ENCORE_40N-12HZ_AWB__13274_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2334.93	-4916.38	1650690.02	14679748.94	40°25'12.680"N	104°57'47.120"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#36 ENCORE 40N-12HZ (551'FNL & 280'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	90.72°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 40N-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 40N-12HZ AWB <13274>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (145 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	107.600	0.00	0.00	0.00	0.00	40°25'12.680"N	104°57'47.120"W	0.00	
16.00	0.000	107.600	16.00	0.00	0.00	0.00	40°25'12.680"N	104°57'47.120"W	0.00	
127.00	0.190	107.600	127.00	0.18	-0.06	0.18	40°25'12.679"N	104°57'47.118"W	0.17	BEGIN MWD SURVEYS
218.00	0.730	200.400	218.00	0.13	-0.64	0.12	40°25'12.674"N	104°57'47.118"W	0.84	
309.00	2.060	197.800	308.97	-0.55	-2.75	-0.58	40°25'12.653"N	104°57'47.128"W	1.46	
437.00	4.240	210.970	436.77	-3.61	-8.99	-3.72	40°25'12.591"N	104°57'47.168"W	1.78	
595.00	7.240	215.510	593.96	-12.24	-22.11	-12.51	40°25'12.462"N	104°57'47.282"W	1.92	
690.00	7.320	216.620	688.19	-19.20	-31.84	-19.60	40°25'12.365"N	104°57'47.373"W	0.17	
785.00	8.850	214.410	782.25	-26.80	-42.73	-27.34	40°25'12.258"N	104°57'47.474"W	1.64	
975.00	12.270	212.420	969.00	-45.53	-71.84	-46.43	40°25'11.970"N	104°57'47.720"W	1.81	
1070.00	12.660	211.500	1061.76	-56.16	-89.23	-57.28	40°25'11.798"N	104°57'47.861"W	0.46	
1165.00	13.210	208.460	1154.35	-66.54	-107.65	-67.89	40°25'11.616"N	104°57'47.998"W	0.92	
1354.00	16.670	206.440	1336.94	-88.36	-150.92	-90.26	40°25'11.189"N	104°57'48.287"W	1.85	
1449.00	16.870	207.740	1427.90	-100.54	-175.33	-102.75	40°25'10.947"N	104°57'48.448"W	0.45	
1545.00	16.520	209.200	1519.85	-113.37	-199.57	-115.89	40°25'10.708"N	104°57'48.618"W	0.57	
1639.00	16.370	209.850	1610.01	-126.20	-222.72	-129.00	40°25'10.479"N	104°57'48.788"W	0.25	
1735.00	16.210	210.340	1702.15	-139.41	-246.02	-142.50	40°25'10.249"N	104°57'48.962"W	0.22	
1798.00	16.830	210.380	1762.55	-148.26	-261.48	-151.56	40°25'10.096"N	104°57'49.080"W	0.98	TIE-ONTO MWD SURVEYS
1893.00	16.590	208.170	1853.54	-161.32	-285.30	-164.92	40°25'09.861"N	104°57'49.252"W	0.71	BEGIN BHI MWD+IFR SURVEYS
1989.00	17.920	210.400	1945.22	-174.95	-310.12	-178.86	40°25'09.615"N	104°57'49.432"W	1.55	
2084.00	18.350	214.020	2035.50	-190.40	-335.12	-194.62	40°25'09.368"N	104°57'49.636"W	1.27	
2179.00	17.990	213.890	2125.76	-206.64	-359.70	-211.17	40°25'09.126"N	104°57'49.850"W	0.38	
2274.00	19.040	215.400	2215.85	-223.48	-384.51	-228.33	40°25'08.880"N	104°57'50.072"W	1.21	
2370.00	19.220	215.720	2306.54	-241.46	-410.10	-246.62	40°25'08.628"N	104°57'50.309"W	0.22	
2465.00	19.790	215.700	2396.09	-259.65	-435.85	-265.14	40°25'08.373"N	104°57'50.548"W	0.60	
2561.00	20.140	215.410	2486.32	-278.37	-462.52	-284.20	40°25'08.110"N	104°57'50.794"W	0.38	
2656.00	19.240	214.660	2575.77	-296.42	-488.73	-302.58	40°25'07.851"N	104°57'51.032"W	0.98	
2752.00	18.790	214.270	2666.53	-313.80	-514.51	-320.28	40°25'07.596"N	104°57'51.261"W	0.49	
2847.00	19.490	216.370	2756.28	-331.49	-539.92	-338.29	40°25'07.345"N	104°57'51.494"W	1.03	
2942.00	18.840	216.340	2846.01	-349.66	-565.04	-356.78	40°25'07.097"N	104°57'51.733"W	0.68	
3037.00	17.250	215.790	2936.34	-366.69	-588.82	-374.11	40°25'06.861"N	104°57'51.957"W	1.68	
3133.00	17.720	217.390	3027.90	-383.59	-611.97	-391.30	40°25'06.633"N	104°57'52.179"W	0.70	
3228.00	17.590	216.740	3118.43	-400.67	-634.96	-408.67	40°25'06.406"N	104°57'52.404"W	0.25	
3324.00	17.670	214.850	3209.92	-417.37	-658.54	-425.67	40°25'06.172"N	104°57'52.623"W	0.60	
3419.00	17.600	213.190	3300.46	-433.17	-682.40	-441.77	40°25'05.937"N	104°57'52.832"W	0.53	
3514.00	17.990	213.760	3390.91	-448.88	-706.61	-457.79	40°25'05.697"N	104°57'53.039"W	0.45	
3609.00	18.350	217.110	3481.17	-465.76	-730.74	-474.96	40°25'05.459"N	104°57'53.261"W	1.16	
3704.00	19.840	221.230	3570.95	-485.10	-754.79	-494.61	40°25'05.221"N	104°57'53.515"W	2.11	
3799.00	20.480	221.230	3660.13	-506.37	-779.41	-516.19	40°25'04.978"N	104°57'53.794"W	0.67	
3894.00	20.840	220.730	3749.02	-528.03	-804.72	-538.17	40°25'04.728"N	104°57'54.078"W	0.42	
3989.00	20.840	219.130	3837.80	-549.39	-830.63	-559.86	40°25'04.472"N	104°57'54.358"W	0.60	
4084.00	18.630	214.350	3927.23	-568.30	-856.27	-579.09	40°25'04.219"N	104°57'54.607"W	2.88	
4179.00	16.480	210.970	4017.80	-583.50	-880.36	-594.59	40°25'03.981"N	104°57'54.807"W	2.50	
4274.00	17.170	212.730	4108.73	-597.72	-903.71	-609.11	40°25'03.750"N	104°57'54.995"W	0.90	
4370.00	17.460	213.780	4200.38	-613.09	-927.60	-624.77	40°25'03.514"N	104°57'55.198"W	0.44	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 40N-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 40N-12HZ AWB <13274>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (145 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4465.00	19.000	213.940	4290.61	-629.33	-952.27	-641.33	40°25'03.270"N	104°57'55.412"W	1.62	
4560.00	17.880	214.320	4380.73	-645.88	-977.15	-658.19	40°25'03.024"N	104°57'55.630"W	1.19	
4656.00	16.990	214.710	4472.32	-661.88	-1000.85	-674.49	40°25'02.790"N	104°57'55.840"W	0.94	
4751.00	17.520	213.200	4563.04	-677.31	-1024.23	-690.22	40°25'02.559"N	104°57'56.044"W	0.73	
4846.00	18.230	212.710	4653.46	-692.87	-1048.69	-706.08	40°25'02.317"N	104°57'56.249"W	0.76	
4941.00	18.320	213.620	4743.67	-708.85	-1073.63	-722.38	40°25'02.071"N	104°57'56.459"W	0.31	
5036.00	16.840	212.850	4834.23	-724.28	-1097.63	-738.11	40°25'01.834"N	104°57'56.663"W	1.58	
5131.00	16.020	212.480	4925.35	-738.50	-1120.24	-752.61	40°25'01.610"N	104°57'56.850"W	0.87	
5226.00	16.530	215.270	5016.54	-753.06	-1142.34	-767.46	40°25'01.392"N	104°57'57.042"W	0.98	
5321.00	16.650	217.150	5107.59	-768.81	-1164.22	-783.48	40°25'01.176"N	104°57'57.249"W	0.58	
5416.00	17.040	218.060	5198.51	-785.33	-1186.03	-800.28	40°25'00.960"N	104°57'57.467"W	0.50	
5511.00	16.260	216.300	5289.53	-801.52	-1207.71	-816.74	40°25'00.746"N	104°57'57.679"W	0.98	
5606.00	15.960	216.000	5380.80	-816.80	-1228.99	-832.29	40°25'00.535"N	104°57'57.880"W	0.33	
5701.00	15.740	217.910	5472.19	-832.13	-1249.72	-847.88	40°25'00.331"N	104°57'58.082"W	0.60	
5796.00	16.870	225.080	5563.37	-849.56	-1269.63	-865.56	40°25'00.134"N	104°57'58.310"W	2.43	
5891.00	19.660	225.380	5653.58	-870.44	-1290.59	-886.70	40°24'59.927"N	104°57'58.584"W	2.94	
5987.00	18.250	220.420	5744.38	-891.39	-1313.38	-907.94	40°24'59.702"N	104°57'58.858"W	2.23	
6082.00	17.240	214.410	5834.86	-908.70	-1336.32	-925.55	40°24'59.475"N	104°57'59.086"W	2.20	
6178.00	17.660	212.910	5926.44	-924.35	-1360.28	-941.50	40°24'59.238"N	104°57'59.292"W	0.64	
6272.00	17.340	213.090	6016.09	-939.45	-1383.99	-956.89	40°24'59.004"N	104°57'59.491"W	0.35	
6368.00	16.930	212.410	6107.83	-954.45	-1407.77	-972.19	40°24'58.769"N	104°57'59.689"W	0.48	
6463.00	17.320	210.390	6198.62	-968.72	-1431.65	-986.76	40°24'58.533"N	104°57'59.877"W	0.75	
6559.00	16.990	202.650	6290.36	-981.03	-1456.92	-999.39	40°24'58.283"N	104°58'00.041"W	2.40	
6654.00	19.180	186.590	6380.72	-987.82	-1485.26	-1006.54	40°24'58.003"N	104°58'00.133"W	5.71	
6749.00	25.450	160.070	6468.78	-982.20	-1520.07	-1001.35	40°24'57.659"N	104°58'00.066"W	12.33	
6844.00	28.500	136.950	6553.67	-959.25	-1555.93	-978.85	40°24'57.305"N	104°57'59.775"W	11.42	
6939.00	26.990	120.750	6637.87	-924.86	-1583.56	-944.80	40°24'57.032"N	104°57'59.335"W	8.07	
7034.00	26.510	110.730	6722.74	-886.25	-1602.09	-906.43	40°24'56.849"N	104°57'58.839"W	4.77	
7130.00	28.480	107.500	6807.90	-844.20	-1616.56	-864.55	40°24'56.706"N	104°57'58.297"W	2.57	
7158.00†	31.090	108.817	6832.20	-830.94	-1620.90	-851.34	40°24'56.663"N	104°57'58.126"W	9.61	ENTERED LANDBOX
7226.00	37.470	111.320	6888.36	-794.85	-1634.10	-815.42	40°24'56.532"N	104°57'57.662"W	9.61	
7254.00†	40.766	112.281	6910.08	-778.37	-1640.66	-799.02	40°24'56.467"N	104°57'57.450"W	11.97	SSPG
7315.00†	47.970	113.993	6953.66	-738.98	-1657.45	-759.84	40°24'56.302"N	104°57'56.943"W	11.97	NBRR
7321.00	48.680	114.140	6957.65	-734.87	-1659.28	-755.75	40°24'56.284"N	104°57'56.891"W	11.97	
7416.00	59.590	110.560	7013.24	-663.37	-1688.35	-684.61	40°24'55.996"N	104°57'55.971"W	11.88	
7511.00	68.280	103.350	7054.98	-581.53	-1713.00	-603.07	40°24'55.753"N	104°57'54.917"W	11.40	
7576.00†	72.310	97.948	7076.91	-521.29	-1724.26	-542.97	40°24'55.641"N	104°57'54.140"W	9.98	N470_B_CK
7606.00	74.220	95.540	7085.55	-492.72	-1727.63	-514.44	40°24'55.608"N	104°57'53.771"W	9.98	
7702.00	79.460	91.360	7107.41	-399.40	-1733.22	-421.18	40°24'55.553"N	104°57'52.565"W	6.91	
7797.00	80.750	91.080	7123.73	-305.82	-1735.21	-327.62	40°24'55.533"N	104°57'51.356"W	1.39	
7857.00†	85.031	90.408	7131.16	-246.29	-1735.98	-268.10	40°24'55.526"N	104°57'50.586"W	7.22	LANDING POINT
7861.00†	85.316	90.364	7131.49	-242.31	-1736.01	-264.11	40°24'55.525"N	104°57'50.535"W	7.22	N700_C_CK
7893.00	87.600	90.010	7133.47	-210.37	-1736.11	-232.18	40°24'55.524"N	104°57'50.122"W	7.22	
7988.00	87.690	89.470	7137.37	-115.47	-1735.68	-137.26	40°24'55.529"N	104°57'48.895"W	0.58	
8083.00	88.060	89.250	7140.90	-20.56	-1734.62	-42.33	40°24'55.539"N	104°57'47.667"W	0.45	



Actual Wellpath Report

ENCORE 40N-12HZ AWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 40N-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 40N-12HZ AWB <13274>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8178.00	88.310	89.000	7143.90	74.36	-1733.17	52.61	40°24'55.553"N	104°57'46.440"W	0.37	
8273.00	88.610	88.650	7146.46	169.27	-1731.22	147.56	40°24'55.573"N	104°57'45.212"W	0.49	
8368.00	88.240	89.920	7149.07	264.20	-1730.04	242.51	40°24'55.584"N	104°57'43.985"W	1.39	
8463.00	88.730	90.110	7151.58	359.16	-1730.06	337.48	40°24'55.584"N	104°57'42.757"W	0.55	
8557.00	89.350	90.180	7153.16	453.14	-1730.30	431.46	40°24'55.582"N	104°57'41.542"W	0.66	
8653.00	90.250	89.330	7153.49	549.13	-1729.89	527.46	40°24'55.586"N	104°57'40.301"W	1.29	
8748.00	90.030	91.140	7153.26	644.12	-1730.28	622.46	40°24'55.582"N	104°57'39.073"W	1.92	
8843.00	88.770	92.670	7154.25	739.09	-1733.44	717.39	40°24'55.551"N	104°57'37.845"W	2.09	
8939.00	90.460	93.300	7154.90	835.01	-1738.44	813.26	40°24'55.501"N	104°57'36.606"W	1.88	
9034.00	90.090	91.300	7154.44	929.96	-1742.25	908.17	40°24'55.464"N	104°57'35.379"W	2.14	
9129.00	88.520	89.270	7155.59	1024.95	-1742.72	1003.16	40°24'55.459"N	104°57'34.151"W	2.70	
9224.00	89.040	89.070	7157.62	1119.89	-1741.35	1098.13	40°24'55.472"N	104°57'32.923"W	0.59	
9320.00	90.000	88.920	7158.42	1215.84	-1739.66	1194.11	40°24'55.489"N	104°57'31.682"W	1.01	
9415.00	89.480	89.660	7158.85	1310.81	-1738.48	1289.10	40°24'55.501"N	104°57'30.454"W	0.95	
9510.00	89.850	90.080	7159.41	1405.80	-1738.27	1384.09	40°24'55.503"N	104°57'29.226"W	0.59	
9606.00	90.890	90.170	7158.79	1501.79	-1738.48	1480.09	40°24'55.501"N	104°57'27.985"W	1.09	
9701.00	88.950	89.540	7158.92	1596.77	-1738.24	1575.09	40°24'55.503"N	104°57'26.757"W	2.15	
9796.00	89.940	89.940	7159.84	1691.75	-1737.81	1670.08	40°24'55.507"N	104°57'25.529"W	1.12	
9891.00	88.120	90.150	7161.45	1786.73	-1737.88	1765.06	40°24'55.506"N	104°57'24.301"W	1.93	
9986.00	88.800	90.600	7164.00	1881.69	-1738.50	1860.02	40°24'55.500"N	104°57'23.073"W	0.86	
10081.00	90.060	90.920	7164.95	1976.69	-1739.76	1955.01	40°24'55.488"N	104°57'21.845"W	1.37	
10176.00	90.890	91.100	7164.16	2071.68	-1741.44	2049.99	40°24'55.471"N	104°57'20.617"W	0.89	
10272.00	89.660	90.890	7163.70	2167.68	-1743.10	2145.97	40°24'55.454"N	104°57'19.376"W	1.30	
10367.00	88.820	90.760	7164.96	2262.67	-1744.47	2240.95	40°24'55.441"N	104°57'18.148"W	0.89	
10461.00	89.260	90.490	7166.53	2356.65	-1745.50	2334.93	40°24'55.431"N	104°57'16.933"W	0.55	
10557.00	90.610	90.390	7166.64	2452.65	-1746.23	2430.93	40°24'55.423"N	104°57'15.692"W	1.41	
10651.00	89.290	90.980	7166.72	2546.65	-1747.36	2524.92	40°24'55.412"N	104°57'14.477"W	1.54	
10747.00	90.090	91.100	7167.24	2642.64	-1749.10	2620.90	40°24'55.395"N	104°57'13.236"W	0.84	
10842.00	90.030	90.020	7167.14	2737.64	-1750.03	2715.90	40°24'55.385"N	104°57'12.008"W	1.14	
10937.00	89.930	89.130	7167.18	2832.62	-1749.32	2810.89	40°24'55.392"N	104°57'10.780"W	0.94	
11033.00	88.520	89.660	7168.48	2928.59	-1748.31	2906.88	40°24'55.402"N	104°57'09.539"W	1.57	
11127.00	88.760	90.190	7170.71	3022.55	-1748.19	3000.85	40°24'55.403"N	104°57'08.324"W	0.62	
11222.00	89.440	89.720	7172.20	3117.53	-1748.11	3095.84	40°24'55.404"N	104°57'07.096"W	0.87	
11318.00	90.060	89.870	7172.62	3213.51	-1747.77	3191.83	40°24'55.407"N	104°57'05.855"W	0.66	
11412.00	90.580	90.460	7172.09	3307.51	-1748.04	3285.83	40°24'55.404"N	104°57'04.640"W	0.84	
11508.00	90.180	91.810	7171.46	3403.50	-1749.94	3381.81	40°24'55.385"N	104°57'03.399"W	1.47	
11603.00	88.730	91.800	7172.36	3498.48	-1752.93	3476.75	40°24'55.356"N	104°57'02.171"W	1.53	
11698.00	88.730	91.570	7174.47	3593.44	-1755.73	3571.69	40°24'55.328"N	104°57'00.944"W	0.24	
11793.00	89.470	91.400	7175.96	3688.42	-1758.19	3666.65	40°24'55.304"N	104°56'59.716"W	0.80	
11888.00	88.400	90.840	7177.72	3783.40	-1760.05	3761.61	40°24'55.285"N	104°56'58.489"W	1.27	
11983.00	88.830	91.020	7180.02	3878.37	-1761.59	3856.57	40°24'55.270"N	104°56'57.261"W	0.49	
12078.00	89.810	91.420	7181.15	3973.36	-1763.61	3951.54	40°24'55.250"N	104°56'56.033"W	1.11	
12173.00	91.290	91.520	7180.24	4068.34	-1766.05	4046.50	40°24'55.225"N	104°56'54.806"W	1.56	
12268.00	89.690	91.170	7179.42	4163.33	-1768.28	4141.47	40°24'55.203"N	104°56'53.578"W	1.72	
12363.00	91.290	91.990	7178.61	4258.31	-1770.89	4236.42	40°24'55.177"N	104°56'52.350"W	1.89	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 40N-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 40N-12HZ AWB <13274>
Facility	SEC.12-T5N-R68W		

WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12458.00	89.410	90.530	7178.03	4353.30	-1772.98	4331.39	40°24'55.156"N	104°56'51.122"W	2.51	
12554.00	90.340	90.470	7178.24	4449.30	-1773.82	4427.39	40°24'55.148"N	104°56'49.881"W	0.97	
12649.00	89.290	88.570	7178.55	4544.27	-1773.03	4522.38	40°24'55.156"N	104°56'48.653"W	2.29	
12744.00	90.520	87.650	7178.70	4639.17	-1769.89	4617.32	40°24'55.186"N	104°56'47.426"W	1.62	
12840.00	89.070	88.470	7179.05	4735.06	-1766.64	4713.26	40°24'55.218"N	104°56'46.185"W	1.74	
12935.00	90.120	88.380	7179.72	4829.98	-1764.03	4808.23	40°24'55.244"N	104°56'44.958"W	1.11	
13030.00	91.660	88.580	7178.24	4924.90	-1761.51	4903.18	40°24'55.269"N	104°56'43.730"W	1.63	
13126.00	89.970	88.120	7176.88	5020.80	-1758.75	4999.12	40°24'55.296"N	104°56'42.490"W	1.82	
13209.00	91.110	88.690	7176.10	5103.73	-1756.44	5082.09	40°24'55.318"N	104°56'41.417"W	1.54	LAST BHI MWD+IFR SURVEYS
13274.00	91.110	88.690	7174.84	5168.67	-1754.95	5147.06	40°24'55.333"N	104°56'40.577"W	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: ENCORE 40N-12HZ AWB <13274> Ref Wellpath: ENCORE 40N-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	1858.00	1842.00	16.00	1820.00	0.00	0.00	-276.50	-160.12
9.625in Casing Surface	16.00	1848.00	1832.00	16.00	1810.43	0.00	0.00	-273.99	-158.73
8.5in Open Hole	1858.00	13274.00	11416.00	1820.00	7174.84	-276.50	-160.12	-1754.95	5147.06

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	-2432.73	4856.70	1655545.78	14677319.22	40°24'48.636"N	104°56'44.333"W	polygon
SEC.12-T5N-R68W LINES	42.00	-2432.73	4856.70	1655545.78	14677319.22	40°24'48.636"N	104°56'44.333"W	polygon
ENCORE 40N-12HZ BHL ON PLAT (2234'FNL & 50'FEL, SEC.12) REV-1	7158.00	-1778.73	5148.67	1655837.37	14677973.08	40°24'55.098"N	104°56'40.556"W	point
ENCORE 40N-12HZ LANDBOX	7158.00	0.00	0.00	1650690.02	14679748.94	40°25'12.680"N	104°57'47.120"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: ENCORE 40N-12HZ AWB <13274> Ref Wellpath: ENCORE 40N-12HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1798.00	Custom APC_ISCWSA REV 2 MWD	SCIENTIFIC DRILLING MWD SURVEYS <127-1798>	ENCORE 40N-12HZ AWB <13274>
1798.00	13209.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	BHI MWD+IFR SURVEYS 8.5" <1893-13209>	ENCORE 40N-12HZ AWB <13274>
13209.00	13274.00	Blind Drilling (std)	Projection to bit	ENCORE 40N-12HZ AWB <13274>

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#36 ENCORE 40N-12HZ (551'FNL & 280'FWL, SEC.12)
Area	COLORADO	Well	ENCORE 40N-12HZ
Field	LARIMER COUNTY	Wellbore	ENCORE 40N-12HZ AWB <13274>
Facility	SEC.12-T5N-R68W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
127.00	0.190	107.600	127.00	BEGIN MWD SURVEYS
1798.00	16.830	210.380	1762.55	TIE-ONTO MWD SURVEYS
1893.00	16.590	208.170	1853.54	BEGIN BHI MWD+IFR SURVEYS
7158.00	31.090	108.817	6832.20	ENTERED LANDBOX
7254.00	40.766	112.281	6910.08	SSPG
7315.00	47.970	113.993	6953.66	NBRR
7576.00	72.310	97.948	7076.91	N470_B_CK
7857.00	85.031	90.408	7131.16	LANDING POINT
7861.00	85.316	90.364	7131.49	N700_C_CK
13209.00	91.110	88.690	7176.10	LAST BHI MWD+IFR SURVEYS
13274.00	91.110	88.690	7174.84	PROJECTION TO BIT