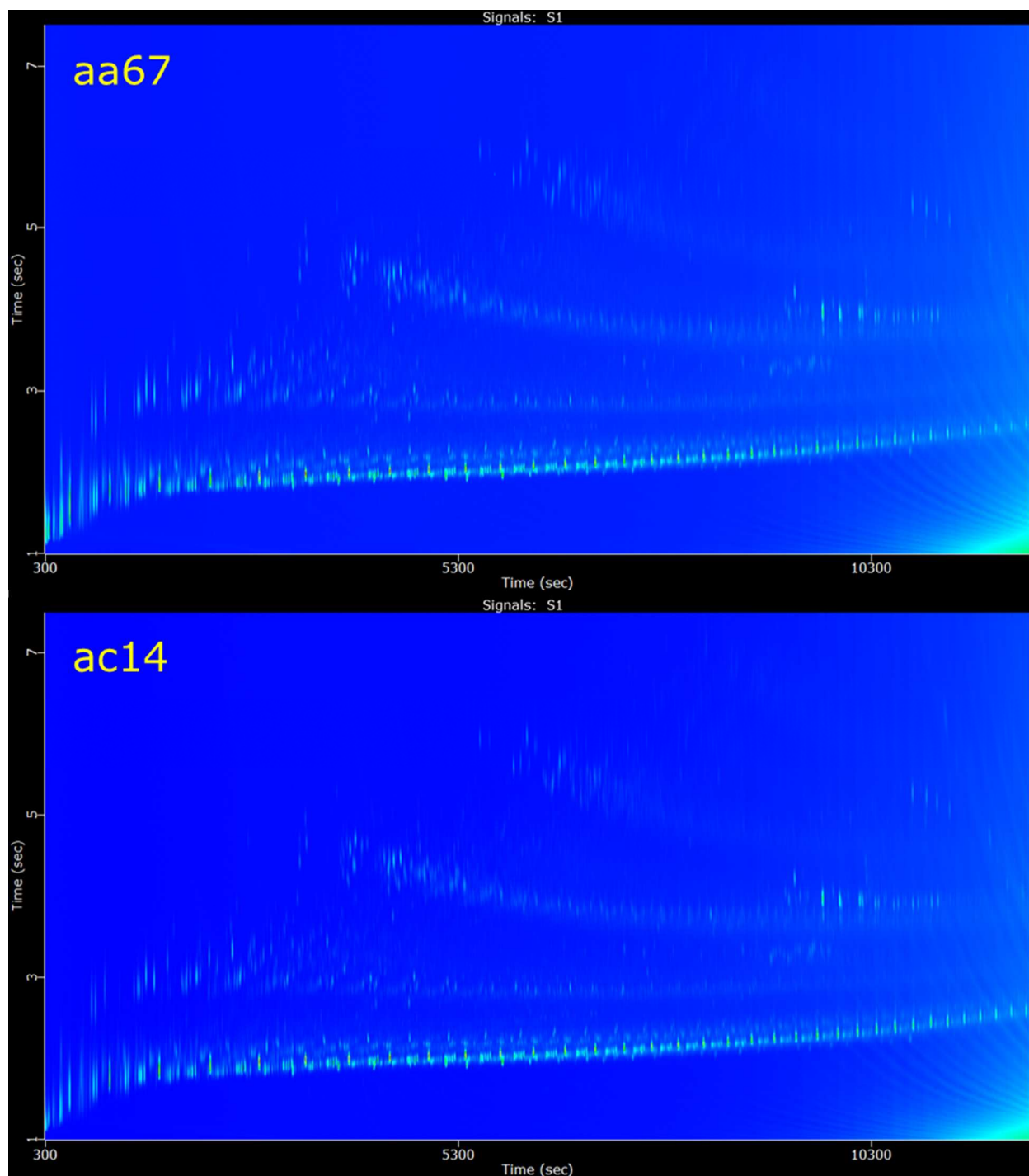


Supporting Information

1. GC×GC chromatograms
2. GC×GC-TOFMS of select compounds



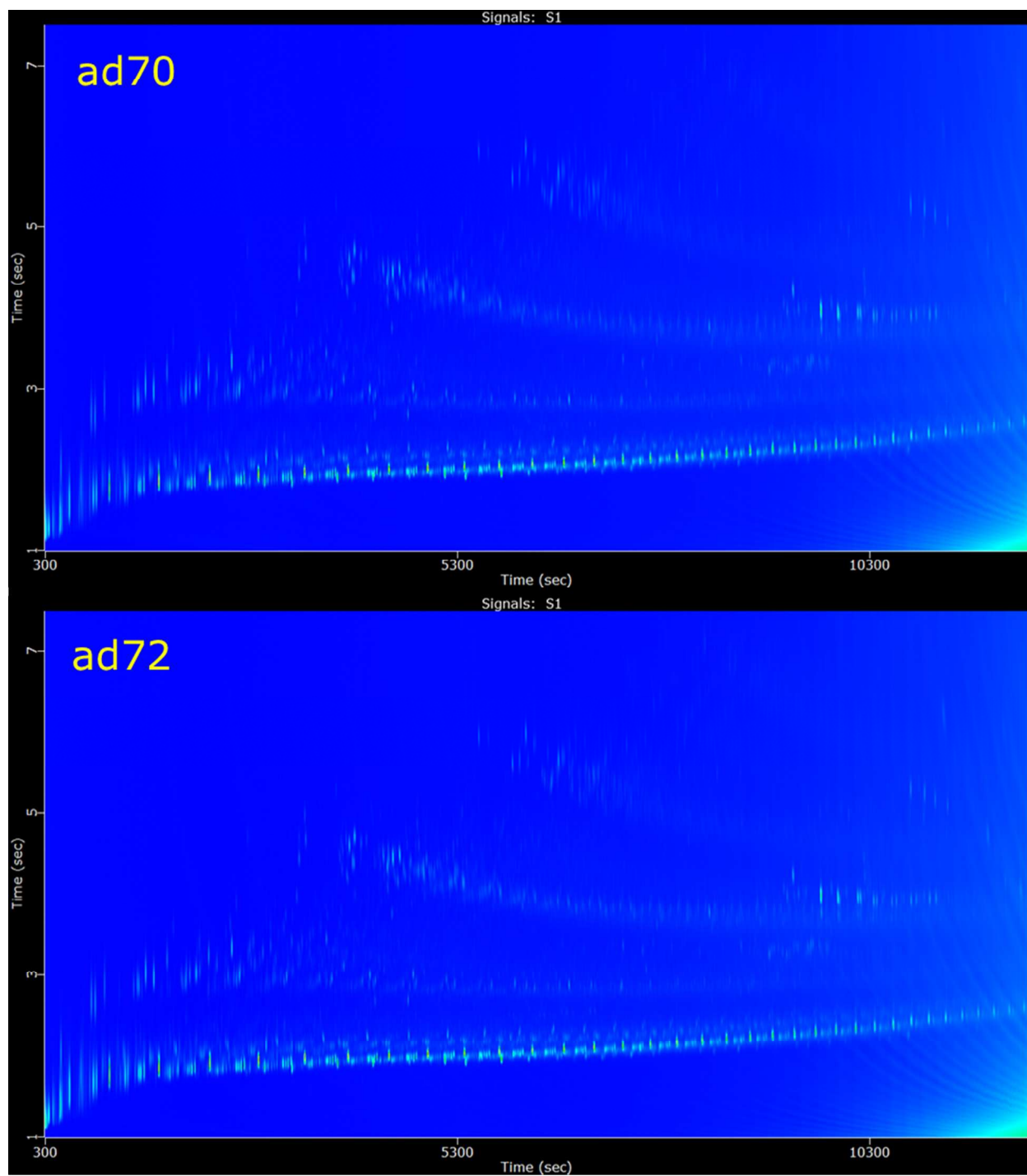


Figure S1. GC×GC chromatograms of all six samples from the reservoir, ordered with increasing depth in the reservoir, expressed as TVDss in feet.

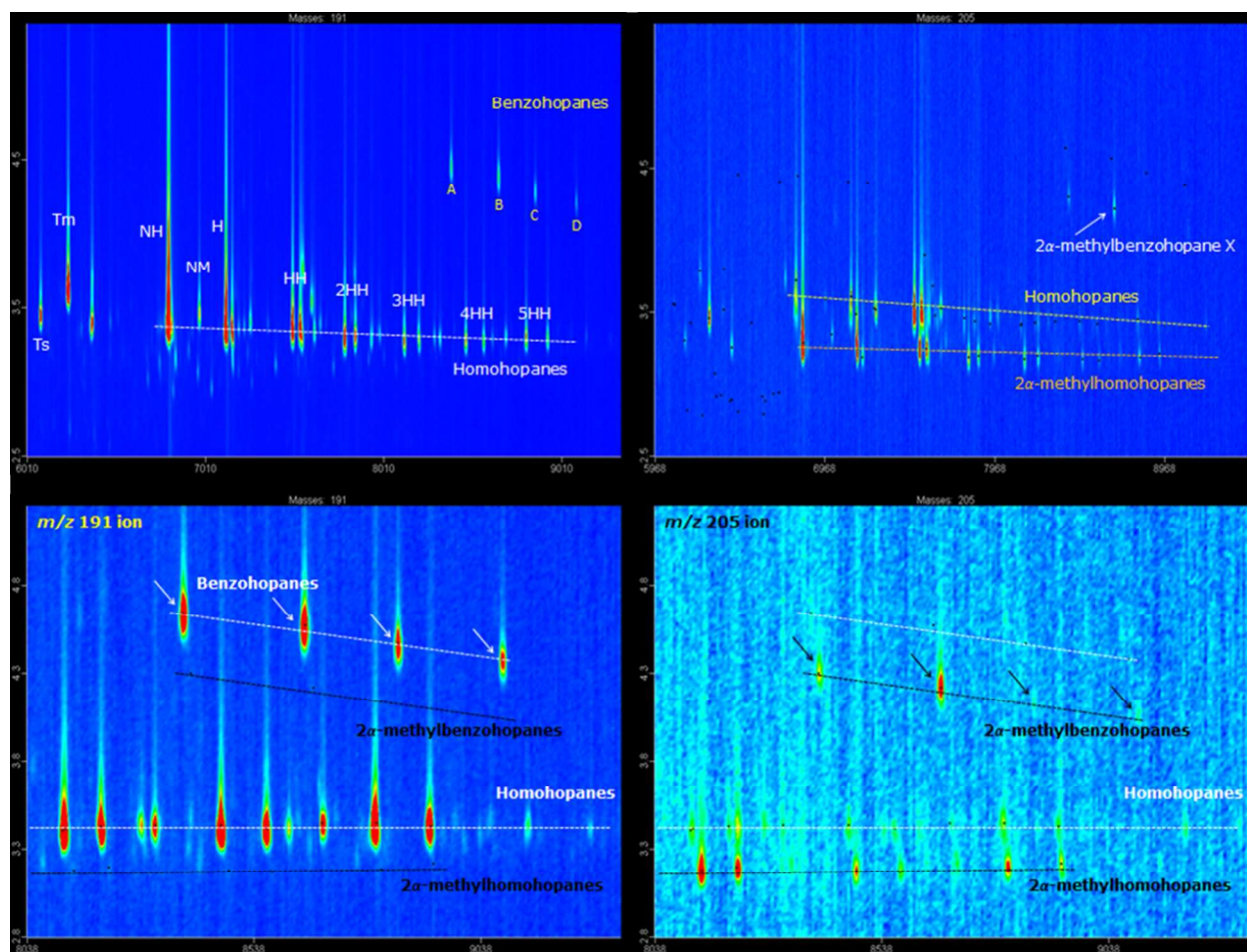


Figure S2. GC \times GC-FID and GC \times GC-TOFMS chromatograms of biomarker region showing presence of benzohopanes and 2 α -methylbenzohopanes, as identified with m/z 191 and 205 ion. MS data is available in Figure S3.

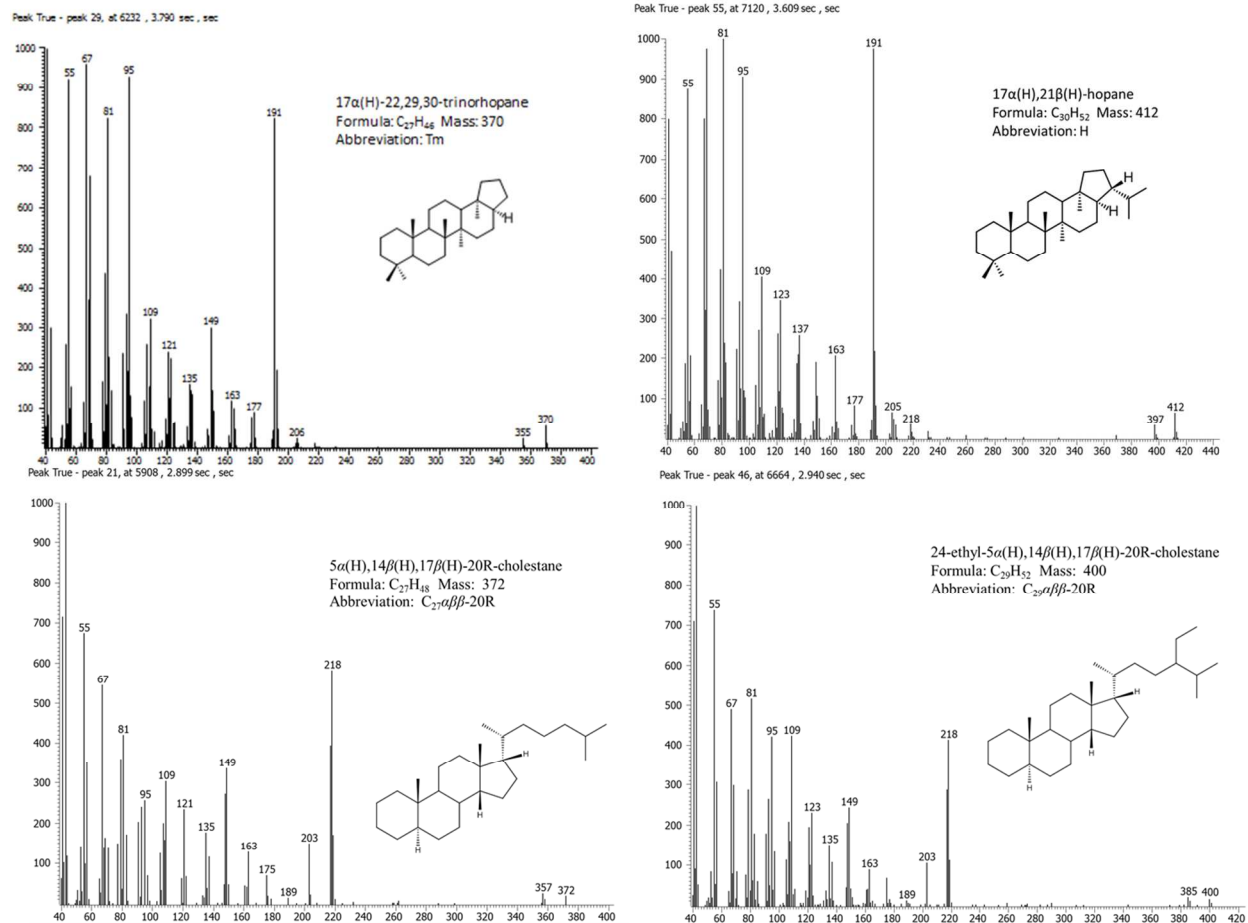


Figure S3. Selected GC \times GC-TOFMS chromatograms used to identify compounds in the biomarker region.

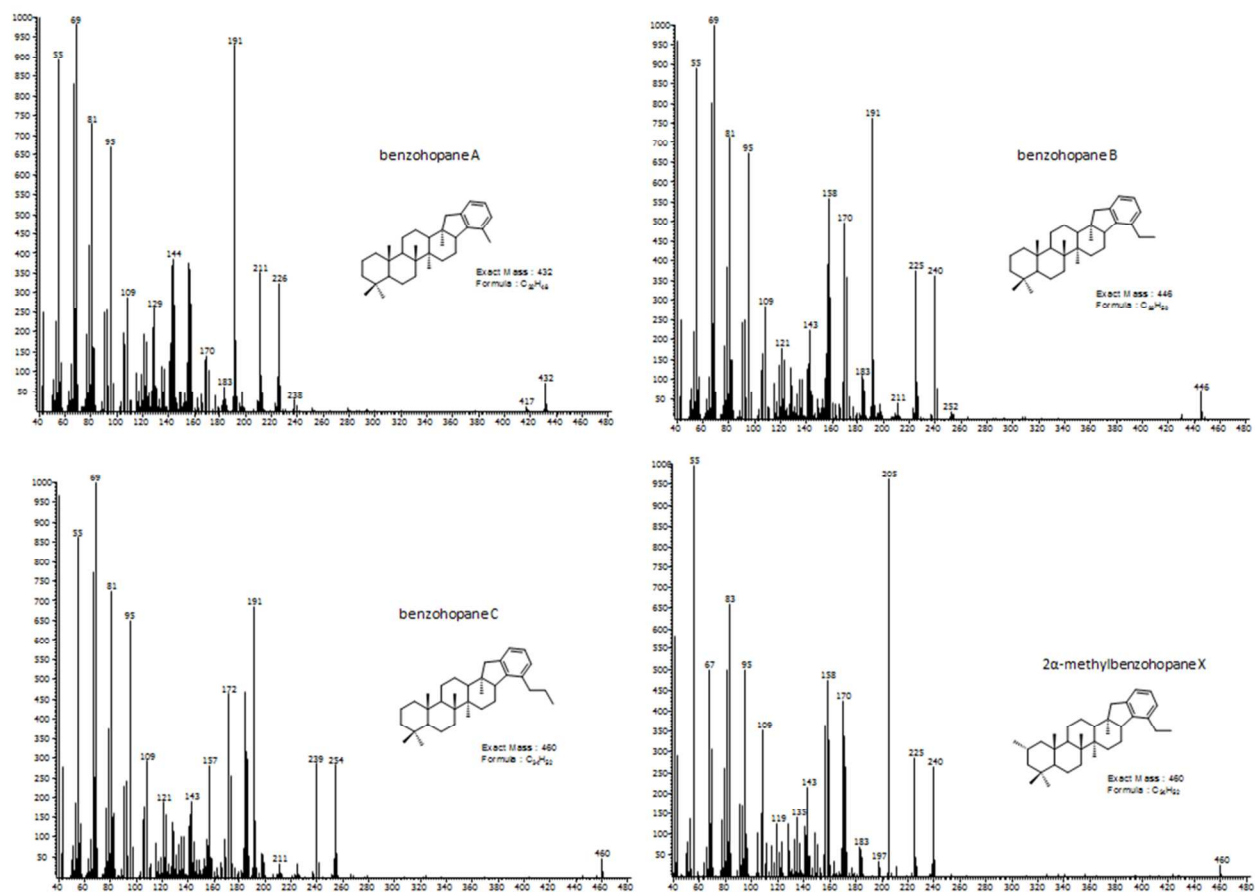


Figure S4. GC \times GC-TOFMS chromatograms of benzohopanes and 2 α -methylbenzohopane.