Jon asked to see something like Figure 1 just for people to get more feel for the raw data. I have included it in Chapter 3 when introducing the raw data. The second figure and description is now included just after showing the single deconvolved/correlated shot gather in Chapter 3, Figure 9. It shows constant offset sections extracted from the same volume from which the single gather was taken.

Figure 1 shows 12 s of data from a single receiver. The ten traces are contiguous 1.2 s sections from the total 12 s record. Therefore, both the vertical and horizontal axes are time in seconds.

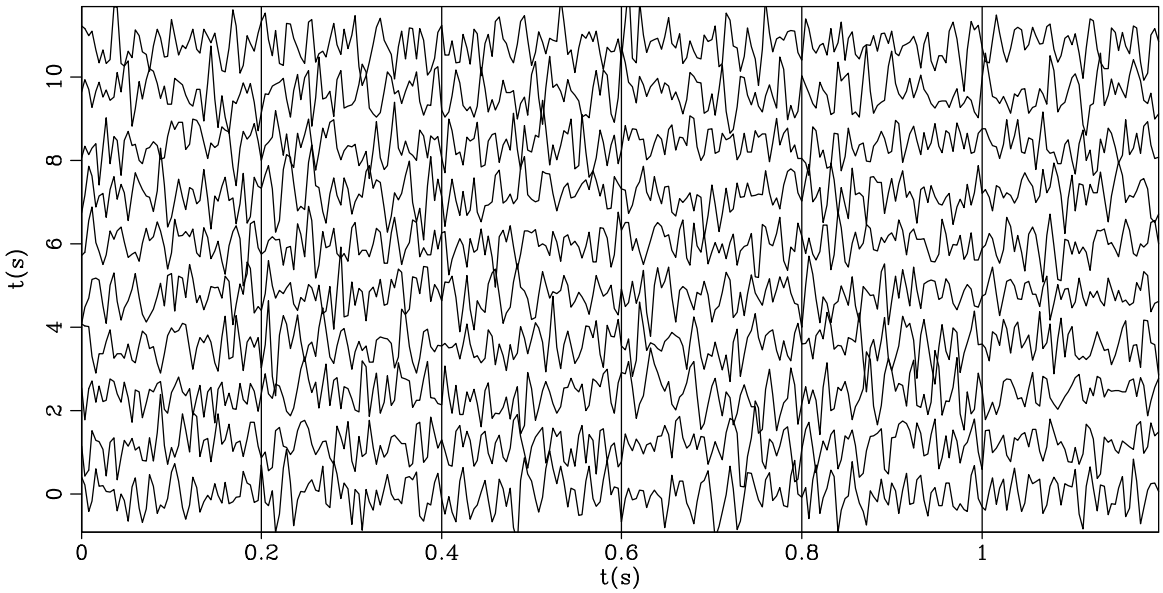

Figure 1: Ten contiguous 1.2 s sections of data from a single raw record from the array. -wiggle [ER]

Figure 2 shows two constant crossline offset sections extracted from a volume of deconvolved synthesized shot gathers. The crossline offset is 2400 m between the two OBC lines with bold receiver locations in panel a. Panel b was produced by correlating traces from West to East (bottom to top of panel a), while panel c shows reciprocal correlations. Active seismic data are symmetric for these two sections. Therefore, events in the synthesized sections must be present in both panels to be geologic reflections. Alternatively, panels b and c are mathematically equivalent to the causal and acausal parts of the correlations performed in a

single direction. The causal and acausal parts of the correlations for a successfully synthesized volume of shot gathers are also symmetric. The lack of identifiable events in panel b, and the concomitant lack of symmetry between the panels, proves that the raw data processed by correlation do not fulfill the source distribution requirements of the theory of interferometry, equation 1. The strong event below 1 s in panel b is the event discussed in Figure 3.9 on which the bold white line is overlain. These sections, and similar ones exploring a full range of crossline offset, do not reveal geologically feasible events.

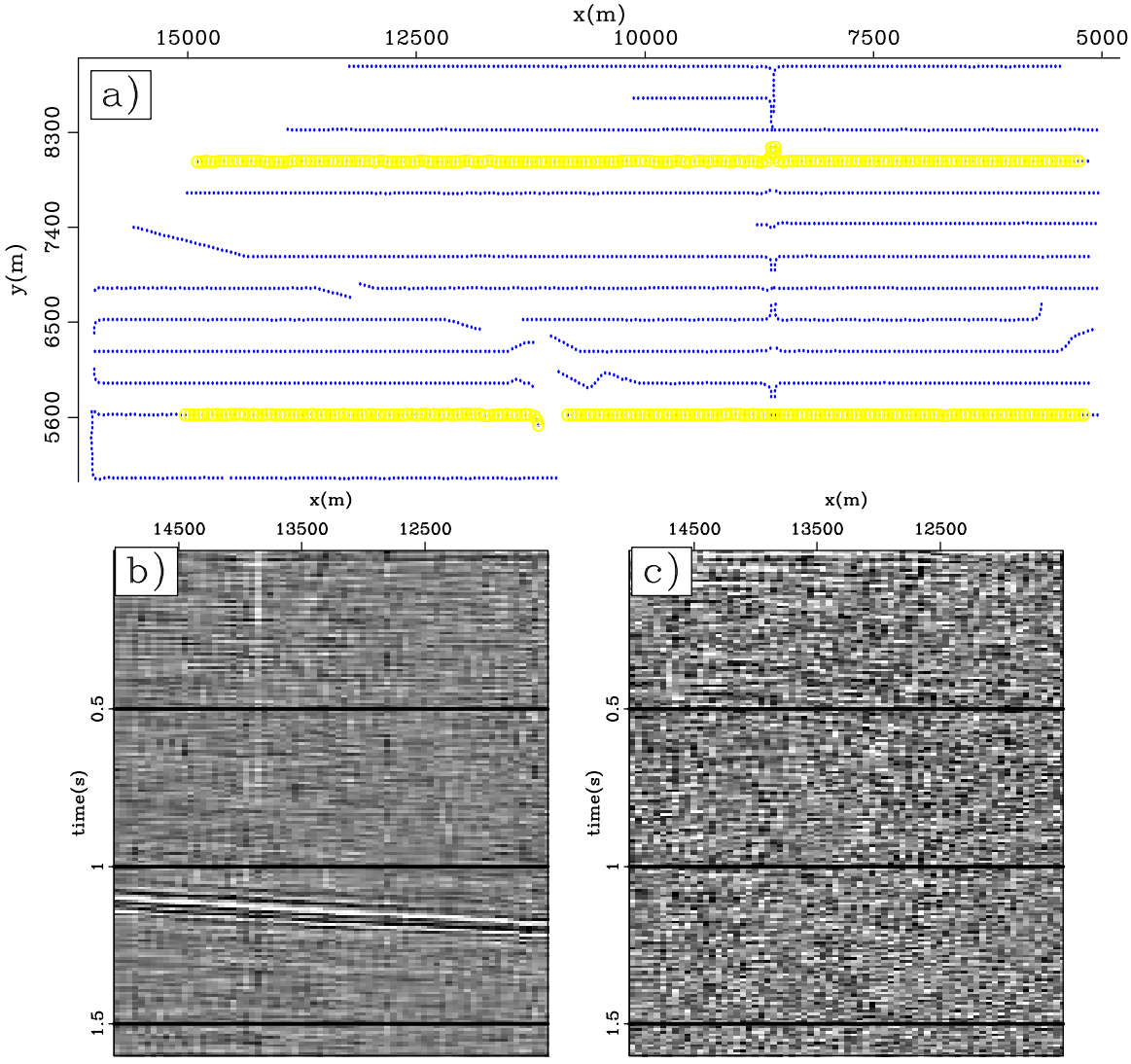

Figure 2: Reciprocal constant offset sections produced by correlating traces in the two bold OBC lines in panel a. -conoff [NR]