

### **DATA REPOSITORY FIGURE CAPTIONS**

Figure DR1: Scan-line data across relays in Figure 6. Scan-line data across the extensional relay includes (a) the frequency and (b) the orientation of deformation bands, and the (c) frequency and (d) orientation of joints.

Figure DR2: Scan-line data across the contractional relay includes (a) the frequency and (b) the orientations of deformation bands, and the (c) frequency and (d) orientations of joints.

Figure DR3: Intersection of segment 2 with segment 1 at Courthouse Canyon in Figure 8. Scan-line data across the Courthouse Canyon intersection from segment 1 into the footwall includes (a) the frequency and (b) the orientation of deformation bands, as well as (c) the frequency and (d) orientation of joints. Similarly, scan-line data from segment 2a into the hanging wall includes (e) the frequency and (f) the orientation of deformation bands, as well as the (g) frequency and (h) orientation of joints.

Figure DR4: Intersection of segment 3 with segment 2b at Mill Canyon in Figure 6b. Scan-line data across segment 3 includes (a) the frequency and (b) the orientation of deformation bands, and the (c) frequency and (d) orientation of joints.

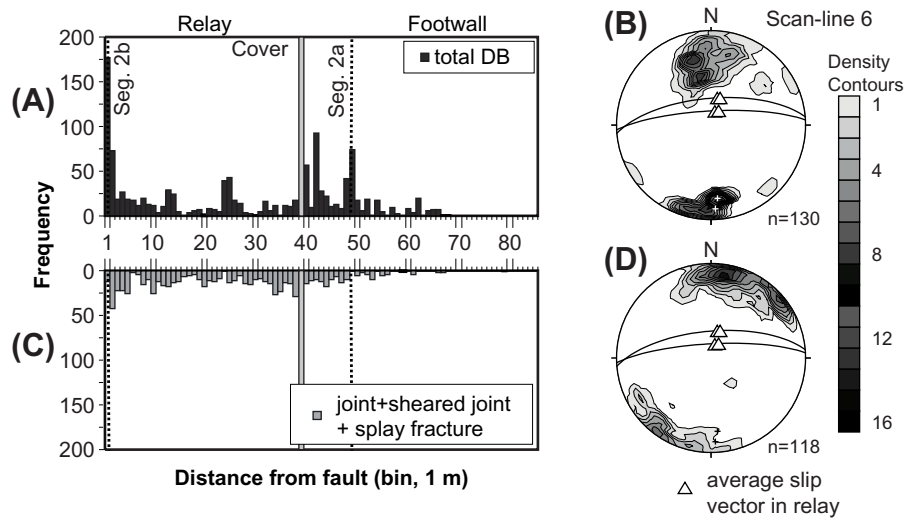


Figure DR1:

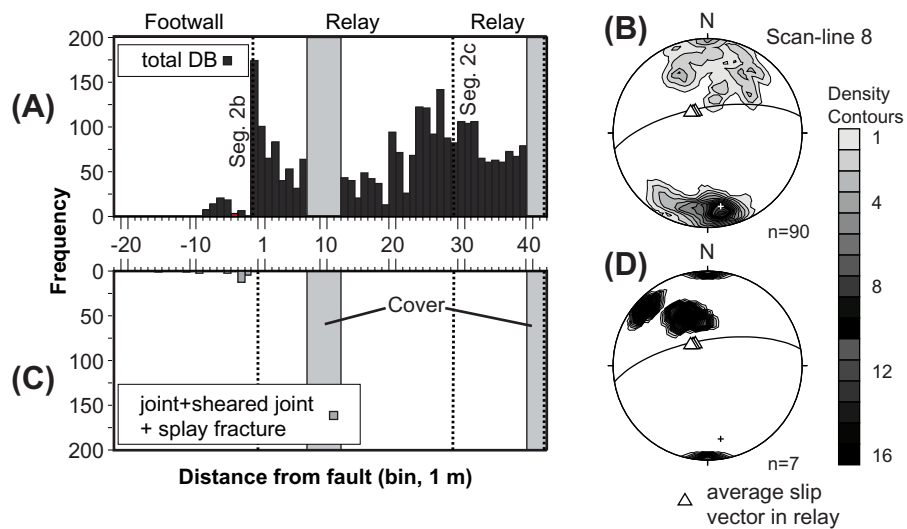


Figure DR2:

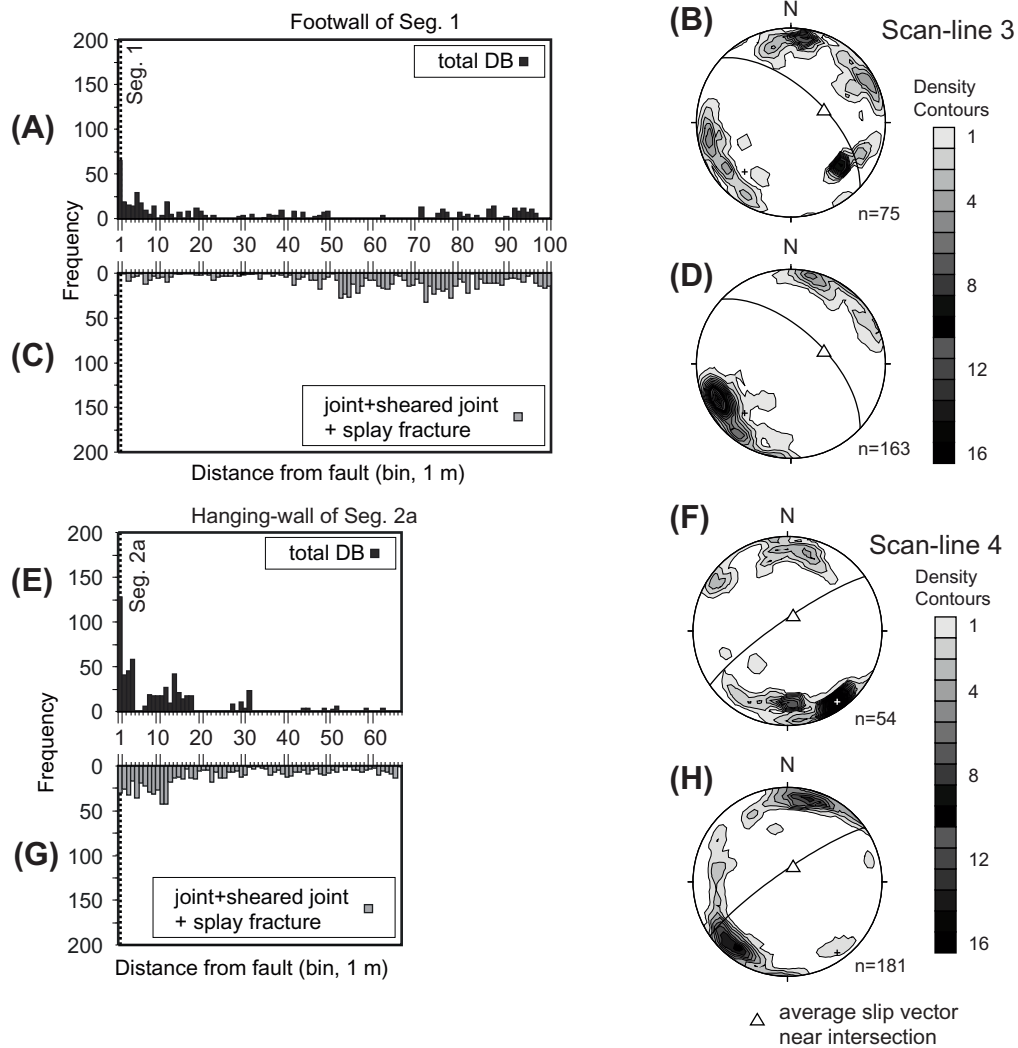


Figure DR3:

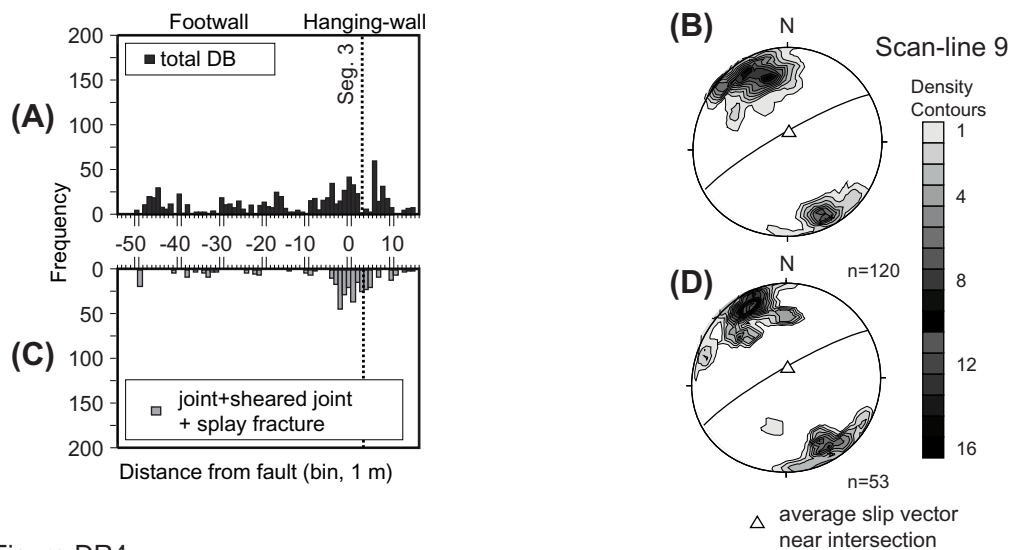


Figure DR4: