**In situ stress field and fault reactivation in south Australia**

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The authors evaluate the in situ stress field and consequent risk of fault reactivation in the Bight Basin and Otway basin in order to assess the risk of fault seal breach at seismically mapped prospects. Borehole breakouts interpreted from dipmeter and image logs in and around the Bight Basin and Otway basin indicate a 130° and 127°maximum horizontal stress orientation, respectively. Seismic attributes are mapped to enhance observations of structural fabrics, showing linear discontinuities likely representing faults and fractures. Discontinuity orientations are consistent with natural fracture orientations identified in image logs, striking E-W and NW-SE, limited to zones around larger faults. The authors consider three different stress regimes. These include a strike-slip faulting stress regime, a normal faulting stress regime, and a case on the boundary of strike-slip and normal faulting stress regimes. In all three cases, faults striking 40º (±15°) of any dip are the least likely to be reactivated.

**References**

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