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## Constraining In-Situ Stress in North and South Oman with Implications for Exploration and Drilling

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Electrical and acoustic wellbore image data from numerous exploration wells in north and south Oman were analysed to detect and orient stress-induced well-bore failures. Complementary data including LOT (leak-off tests), minifrac, pore pressure and rock strength measurements were integrated to constrain the complete in situ stress tensor.

The results imply that the stress state in Oman is characterised by strike-slip faulting, where  $SH_{max} > S_v > SH_{min}$ .  $SH_{max}$  is generally oriented NE-SW except near major fault zones (e.g. Maradi) and within carbonate floaters of the Infra Cambrian Ara Salt. The substantial difference between the minimum and maximum stresses appears sufficient to bring optimally oriented faults close to incipient shear failure (i.e., frictional equilibrium). The results have been applied to assess fault slip, wellbore stability and fracture initiation in North Oman.

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