

## **Abstract**

### *Fractured Reservoir Identification on Seismic Data Using Seismic Curvature Attribute and FMI Logs in Teapot Dome, Wyoming*

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This study compares fractures characterization estimates based on seismic attribute analysis (curvature) with information based on Formation Micro Imager (FMI) logs in Teapot Dome, Wyoming. The fracture intensity from each well was calculated. Types of curvature were calculated (maximum, minimum, mean, Gaussian, most positive and most negative) using a horizon picked on the Tensleep Formation. The horizon was spatially smoothed to improve robustness of results. A comparison between fracture density and maximum curvature showed a weak negative correlation ( $R=0.24$ ) while the relationship between fracture density and minimum curvature showed a weak positive correlation ( $R=0.326$ ). The inconclusive results suggest that fracture development of Tensleep depends on other factors than structural curvature but the limited data prevents a definitive answer. Curvature attributes were useful in identifying faults and lineaments in the horizon.