

## **Structural setting of the Metán Basin (NW Argentina): new insights from 2D seismic profiles**

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The Metán Basin is located in the sub-Andean foreland, in the southernmost portion of the Santa Barbara system structural province (NW Argentina).

The upper crust in this region shows a strong segmentation due to inherited stratigraphic and structural discontinuities, related to a Palaeozoic orogenic event and to a Cretaceous to Paleogene rifting event (Kley et al., 1999; Iaffa et al., 2011).

This study seeks to unravel the deep structural setting of the basin, in order to better understand the tectonic evolution of the area. Different seismic sections are analysed, located in the Metán basin and acquired by YPF (Yacimientos Petrolíferos Fiscales, former national oil company of Argentina) in different surveys during the '70s - '80s. Stratigraphic control for the seismic interpretation is provided by petroleum exploratory wells drilled in the basin; they show a stratigraphic succession of syn-rift and post-rift deposits, mainly constituted by a continental succession of red beds, with minor limestone intercalations (Salta Group), overlain by a thick continental foreland basin succession (Orán Group) (Salfity et al., 1981).

From a structural point of view, the Metán basin is characterized by a variety of structural trends, with thrust faults and related folds mainly trending N-S, NE-SW and NNE-SSW. Different mechanism can be responsible for the folding of the sedimentary cover; hangingwall anticlines are represented both by high angle thrust faults produced by inversion of Cretaceous extensional faults (Maffucci et al., 2015), and by fault propagation folds formed during the Andean shortening event.

The study of the interaction between the older reactivated faults and the newly generated ones could provide new insights to unravel the complex structural setting of the area.

### References

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