

## **Gas Potential of Upper Cretaceous Shales in the Center and North Areas of the Eastern Cordillera, Colombia**

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The eastern Cordillera presents excellent potential for gas generation associated with shales. In Fomeque, Chipaque, La Luna, Villeta, Rosablanca, Churuvita, San Gil Inferior, San Gil Superior and San Rafael Formations, were identified thick sequences of shale, with high levels of Total Organic Carbon (2% - 8%) and high thermal maturity levels, reflected in vitrinite reflectance values ranging from 0.5% to 5%. These conditions favor the generation of biogenic and thermogenic gas, and allow predicting its occurrence in some parts of the Eastern Cordillera.

Samples were collected in 10 sections across the Cordillera. Besides detailed stratigraphic columns were constructed (scale 1:300) in which it was possible to determine the lithological characteristics of the intervals of interest. The geochemical data allow to classify the areas determined by its favorability for the occurrence of shale gas, within this sectors stands out the Ubate - Carupa section (Carupa, Cundinamarca), Vara Santa section (San Luis de Gaceno, Boyacá) and Caño Blanco section (Acacias, Meta).

Also this study shows the results of 2D geochemical modeling in the areas of interest and the prospective structures were delineated taking in account the measurement of gas generated in these sectors.