# The Eagle Ford Formation in Northern Coahuila, Mexico: Ongoing Exploration Activities in the Galaxia Area (Burgos Basin)

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## Abstract

An integrated exploration project that includes geophysical, geologic, geochemical, and petrophysical data is being conducted in northeastern Mexico to assess the prospective oil resources of the Eagle Ford Formation, just across the border of southeastern Texas. The study area, called Galaxia, is 1200 square kilometers, and locates east of the Piedras Negras and Eagle Pass border towns. Geologically, this area is located in the westernmost part of the Burgos Basin and is part of the Cretaceous Maverick Basin as well. Previous regional 2D seismic data and a small 3D seismic volume have been interpreted. Additionally, recently acquired 3D seismic has also been interpreted showing a relatively stable tectonic scenario since Late Jurassic time. Regionally, seismic horizons dip gently toward the east. The Eagle Ford Formation has been divided into two units. The Lower Eagle Formation is the oil-producing horizon in south Texas and consists of a couple of well-defined parallel continuous reflectors with high amplitude. Whereas the upper Eagle Ford Formation can be described as a seismic facies made up of several parallel reflectors with high frequency and low amplitude. Updip, the reflectors in this unit become discontinuous with very low amplitude. Based on its well-log expression, the thickness of the Eagle Ford Formation ranges from around 200 to nearly 300 m and can be divided into five units, being the lowermost or oldest one the more radioactive. This is interpreted as the richest organic-matter horizon. Few available core samples from this horizon allow verifying this interpretation and preliminary petrophysical interpretation as well. Scarce geochemical data indicates a COT ranging from 2.5 up to 7 wt% for the Eagle Ford Formation. Two outcrop analogs of this unit, not far away from the Galaxia Area, have been cored continuously and will be utilized to calibrate the subsurface geologic, geochemical, and petrophysical models that will be the basis for oil resource estimations.