Lower Bossier- Haynesville Formations, New Biostratigraphic data, from North Louisiana, Salt Province

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This study reports the discovery in a core sample of a well preserved microfossil association (Radiolaria and Foraminifera), together with ammonites, bivalves and nannofossils.

The material analyzed is from the Core Whitaker 23-1, Haynesville Formation at 11,220 and 11,190 feet, with an observed Haynesville Shale net thickness of 158 feet. The well is located at Section 23 / Township 15 North / Range 13 West, Desoto Parish, Louisiana, North Louisiana, Salt Province.

The use of biostratigraphic methods in subsurface for the Jurassic and Lower Cretaceous units, is not as common as in younger sequences. The analysis of foraminifera and nannofossil associations show the studied core levels as Upper Jurassic. However using the newly discovered radiolarian assemblage, the age is better defined as uppermost Kimmeridgian to lower Upper Tithonian. The Louisiana‘s association is composed by several conspicuous forms, already described for Taman and La Caja Formation, from East Mexico.

The depositional environment according to the radiolarian presence corresponds to normal marine conditions possible with high productivity favored by coastal upwelling. The use and developing of this biostratigraphic tool in subsurface will contribute to develop a more precise description and classification of deep sources and reservoirs in The Gulf of Mexico Basins. Worldwide chronostratigraphic correlations based on these planktonic forms will contribute to a better understanding of the distribution in Middle and Upper Jurassic rocks.