Cenomanian-Turonian Biostratigraphic Update of the Eagle Ford Gas Shale Play, Northeastern Mexico

Anselmo E. González

Pemex PEP

ABSTRACT

As part of AIB's strategy during 2010 was made a multidisciplinary study which covered the area of the Platform of Tamaulipas, Sabinas and Burgos basins, in order to identify the extension of the Cenomanian-Turonian Eagle Ford gas-bearing shale play of South Texas into Mexico, and to evaluate prospective resources. One of the major tasks to develop regional studies is to have an updated stratigraphic framework based on paleontological data, electric logs, and seismic data. For this work, 19 regional stratigraphic sections where constructed, integrating biostratigraphic information from 163 wells and 51 cores; information that provides an updated biostratigraphic column, establishing the stratigraphic correlation of events with similar areas of the South Texas region. Performing the biostratigraphic characterization Late Turonian to Cenomanian through paleontological studies, validating three biozones: *Concavatruncana concavata, Helvetoglobotruncana Helvetica,* and *Whiteinella archeocretaceae* associated with maximum flooding surfaces (MFS) 89.74, 90.78, and 93.5 m (Handerbol, 1998) respectively. From paleontological and geochemical analysis of conventional cores, an association between high abundance and diversity of macrofauna with high values of total organic carbon (TOC) and maturity (Ro) was identified. It confirms the presence of a regional erosive unconformity in the Coniacian, which deepens to the southeast portion of the Burgos Basin, reaching completely erosion of the Late Cretaceous, where this event can be identified in the seismic data.

González, A. E., 2011, Cenomanian-Turonian biostratigraphic update of the Eagle Ford gas shale play, northeastern Mexico: Gulf Coast Association of Geological Societies Transactions, v. 61, p. 735.