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Please fill in your abstract title.	Salt Tectonics and Seafloor Topography – Relation with Seepage Occurrence	
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Abstract

Salt evacuation and diapirism are processes directly associated with basin tectonic events. In rift basins, shoulder uplift and subsidence are mechanisms necessary to create a minimum slope for salt to flow. In addition, sediment load intensifies the slope-related salt movement, and depending on the amount of sediment deposited, will determine the scale of salt movement and the resulting shape of the salt features.

Taking in consideration the different stages and processes of salt diapirism several subsurface salt features can be formed such as, salt domes, salt anticlines, salt sheets, salt sills, salt canopies etc. These different shallow salt structures create an imprint on the sea floor as topographic elevations, depressions, steps and different patterns of fault traces.

The acquisition of a high-resolution bathymetry data allowed for the detailed mapping of the sea floor structures, but not the processes associated with these structures. The combination of the bathymetry data with high quality 3D seismic data allows for the study of the direct relationship between the salt tectonics and the resulting different structures observed on the sea floor.

The correlation of the salt structures, interpreted on the seismic data, with the features observed in the bathymetry data, allowed the establishment of different sea floor domains where the topographic features are directly associated to different salt structures on the subsurface. One of the structures created by the salt mobilization, namely faults, can function as a conduit for hydrocarbon migration to the sea floor, and frequently are associated with seeps and pockmarks.

The integration of these two datasets is important in the study of seeps and pockmarks, and can be used in the characterization of areas to prioritize the acquisition of piston cores to analyze hydrocarbon seepage. Furthermore, studying these subsurface structures increases the likelihood of recovering samples with high hydrocarbon content, this optimizing the chances of establishing the presence of a working hydrocarbon system, especially in new frontier basins.