D-12 LATE CRETACEOUS GEOLOGICAL HISTORY OF ZALTAN PLATFORM (CONCESSION 59), SOUTH CENTRAL SIRT BASIN, LIBYA

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ABSTRACT

The Late Cretaceous stratigraphic sequences are widespread and consist of marine shale and limestone ranging in age from the Turonian up to the Maastrichian. In the study area the sequence of the Late Cretaceous is divided into five clearly recognizable formations. Their distribution depending mainly on the palaeogeography of the pre-existing topography. In ascending order they are ; Pre Upper Cretaceous Sandstone, Evaporitic Turonian Etel Formation (Shallow Water restricted Platform), Coniacian/ Santonian Rachmat Formation (Shallow Open Marine, Slightly Protected), Campanian Sirte Shale (Shallow Restricted Platform) and Maastrichian Waha Limestone (Shallow Carbonate Platform).

The upper Cretaceous sea transgressed towards south either over the basement and granite wash or over Pre-upper Cretaceous sandstone. it encroached gradually on the Al Wahah and Ad Deffah area at the close of Santonian and beginning of Campanian time. During Maastrichian time the continued to transgress to the south until covered most of palaeohighs in the Zaltan platform. Two separated islands has been left uncovered over the palaeohigh, known as Al Wahah and Ad Deffah field area which decreased in size , while the carbonate belts around them, grew narrower as the sea got too deep for the carbonate precipitation. Carbonate facies developed on the highs, these carbonates deposits are well- known as Waha reservoir facies, laterally these facies changes into basinward shally sequence deposits of Sirte shale.