# Accepted Manuscript


Palynological and palaeoenvironmental analyses of the upper Albian-Cenomanian succession in Gindi Basin, Egypt: Implication for transgressive/regressive systems tracts

Ahmed Mansour, Sameh S. Tahoun

PII: S1464-343X(18)30203-6

DOI: 10.1016/j.jafrearsci.2018.07.007

Reference: AES 3269

To appear in: *Journal of African Earth Sciences*

Received Date: 24 February 2018

Revised Date: 24 May 2018

Accepted Date: 9 July 2018

Please cite this article as: Mansour, A., Tahoun, S.S., Palynological and palaeoenvironmental analyses of the upper Albian-Cenomanian succession in Gindi Basin, Egypt: Implication for transgressive/regressive systems tracts, *Journal of African Earth Sciences* (2018), doi: 10.1016/j.jafrearsci.2018.07.007.

# Palynological and palaeoenvironmental analyses of the upper Albian-Cenomanian succession in Gindi Basin, Egypt: Implication for transgressive/regressive systems tracts

**Ahmed Mansour[1] and Sameh S. Tahoun[2]**

[1] Minia University, Geology Department, Faculty of Science, Minia, 61519, Egypt

Email: ahmedmans48@mu.edu.eg

[2] Cairo University, Geology Department, Faculty of Science, Giza, 12613, Egypt

## Abstract

The current contribution illustrates the advantage of the use of quantitative palynological data to palaeoenvironmentally differentiate the similar-looking monotonous, thick clastic interval of the Kharita, Bahariya and Abu Roash "G" units in Gindi Basin, Egypt. The present study aims also to the utilization of the upper Albian-Cenomanian quantitative palynological and palynofacies data and their integral interpretation in a sequence stratigraphic context. The recovered palynomorph assemblages with moderately diverse sporomorphs and dinoflagellate cysts, show poor to fair preservation. Around 47 species of pollen grains, 37 of dinoflagellate cysts and 36 species of pteridophytic spores have been recorded from two sections encountered in El Sagh-1A and BRE 6-1 wells drilled in Gindi Basin; however, achritarchs, microforaminiferal test linings and freshwater algae are impoverished and sparsely documented through the studied intervals. Based on the first downhole appearances (FDAs) of the recovered marker taxa, the encountered Abu Roash "G", Bahariya and the upper Kharita units are palynologically dated as late Cenomanian, early-middle Cenomanian and late Albian, respectively. Relative sea level fluctuation is particularly relevant and deduced from various palynological parameters mainly the terrestrial:marine (T:M) ratio and the palynological marine index (PMI). Based on the