Summary of Paper No. 1

*** Title in English:** **yclic hierarchy and depositional se uences of the iddle- pper Eocene ramp facies: An e ample from eni Suef area east Nile alley Egypt.**

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English Summary

The present wor addresses the cyclo- and se uence stratigraphy of the iddle- pper Eocene ramp facies outcropping on the eastern side of the Nile alley in the icinity of eni Suef ity. The Eocene roc s in the considered area ha e been subdi ided into three roc s units El Fashn Formation (ate utetian- artonian) eni Suef and aadi formations (Priabonian). Nineteen microfacies types were identified their depositional en ironments show a gradual change from the inner to outer ramp depositional settings. The studied mi ed siliciclastic-carbonate deposits are organi ed in small-scale cycles (i.e. peritidal shallow subtidal deep subtidal and e posed subtidal cycles) which are pac aged into medium-scale cycles (cycle sets) and large-scale cycles (depositional se uences). These cycles demonstrate the interplaying relationship between the accommodation space sediment supply and the small-scale sea-le el fluctuations. The studied sedimentary record displays a conspicuous facies ariation that is produced by both the auto- and allocyclic mechanisms. The autogenic cycles are generated by processes acted within the basin of deposition (tidal flat progradation water energy and change in the rate of carbonate production) while the allogenic cycles are controlled mainly by both the sea-le el eustasy and local tectonic acti ities. Four discontinuity hori ons implying sea-le el falls are recogni ed. These are the ate utetian-Early artonian/Early artonian (S -1) Early artonian/ ate atronian (S -2) ate artonian/Early Priabonian (S -3) and Early Priabonain/ ate Priabonian (S -4). These discontinuites brac et four third-order depositional se uences (S-1 to S-4). These depositional se uences comprise transgressi e and highstand systems tracts. They are correlated together and with their time e ui alents in the neighboring areas as well as with the global regimes of Ha et al. (1) in order to ac uire an abridged picture of their regional and global distribution.

Keywords: Eocene eter-scale cycles Depositional se uences eni Suef Egypt.