

Demirel, C., & Candansayar, M. E. 2017. Two-dimensional joint inversions of cross-hole resistivity data and resolution analysis of combined arrays. *Geophysical Prospecting*, 65(3), 876-890.

4.1 STRATIGRAPHY FROM THE PUNGALLA SECTION, ASHDAGH MOUNTAIN, NORTH EASTERN IRAQ

I.M. Ghafor¹ and P.M. Ahmad¹

¹*Geology Department, Sulaimani University, Sulaimanyah, Iraq*

**Corresponding author e-mail: imad.gqfor@univsul.edu.iq*

ABSTRACT

The main purpose of this study is to determine large benthic and planktic foraminifera in Oligocene-Lower Miocene rocks from the Pungalla section, Sulaimaniyah city, NE Iraq, and studied in detail for the first time. The architectural analysis leads to the description of thirty-four species belonging to twenty-three genera of large benthic foraminifera, and seventeen species belonging to five genera of planktic foraminifera in addition to other fossil groups such as echinoid fragments, bryozoan, calcareous algae, bivalve, gastropods, and coral. It is possible to attribute them to the Shurau, Tarjil, Bajwan, Anah, Jeribe, and Fatha formations, which dominantly consist of massive fossiliferous limestone, marly limestone, bedded highly jointed and fractured, oolitic and coralline limestone. The large benthic and planktic foraminifera's identified in the studied section have facilitated the identification of the following foraminiferal zones: five specific Shallow Benthic Zones (SBZs):- *Austrotrillina paucialveolata*- *Austrotrillina brunni*, Assemblage Zone (SBZ21); *Praerhapydionina delicata*- *Peneroplis evolutus* Concurrent-Range Zone (SBZ22A-BZ22B); *Meandrospina anahensis* - *Austrotrillina asmariensis* Assemblage Zone (SBZ23); *Austrotrillina howchini* – *Peneroplis farsensis* Interval Zone (SBZ24) ; *Ammonia beccari*- *Dendritina rangi* Assemblage Zone (SBZ25), and one planktic biozone, *Paragloborotalia opima*-*Dentoglobigerina prasaepis* Assemblage Zone (P21).

These marker foraminifer's species suggest an Oligocene to Early Miocene age. The recognized biozones are correlated with comparatively well-known biozones from other parts of the Tethys region which show a good comparison.

KEY WORDS : Oligocene-Lower Miocene, Foraminifera, Lithostratigraphy, Biostratigraphy, Northeast Iraq