

Diagenesis and Characteristics of Sandstones in the Kyaukkok Formation, Pyu Area, Bago Region

Phyo Wai Maung*

Abstract

The study area is located in the northwestern part of Pyu Township, Bago Region. The study area constitutes a small segment of Pyawbwe Formation (Early Miocene), Kyaukkok Formation (Early Miocene), Obogon Formation (Middle Miocene) and Irrawaddy Formation (Late Miocene to Pliocene). The Kyaukkok Formation is predominantly composed of light yellowish brown to greenish gray colour, generally fine to medium grained sandstone with minor amount of gray shale units. The boundary between the Kyaukkok Formation and underlying Pyawbwe Formation is sharp contact. Lithologically, the lowermost part of Kyaukkok Formation is relatively more arenaceous than the upper most part of Pyawbwe Formation. The best exposure of Kyaukkok Formation can be observed in the Pyu Chaung and Thayet Chaung where thick bedded to massive sandstones were exposed. In the Kyaukkok Formation, the sandstone contains about 70% to 85.5% of the detrital grains and 12.5% to 20% of cement. These sandstones mainly composed of quartz, feldspar, mica, rock fragments and other accessory minerals. Sandstone diagenesis occurs by two processes which are cementation and compaction. Thin sections of representative sandstone samples were chosen for diagenetic studies which include the study of compaction and cementation and their role in the evolution of porosity. Three types of cements have been identified, which include silica, iron oxide and carbonate.

Keywords; Kyaukkok Formation, Sandstone diagenesis, Cementation, Compaction

*Lecturer, Geology Department, Maubin University