

## **Joint Patterns and Structural Analysis of Pulau Bunting, Yan, Kedah**

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The rocks of Pulau Bunting, which consist of metasediments and quartz porphyry, are faulted, sheared and fractured. Metasediments occur in the northern coast and the most eastern part of the island. In the northern coast of the island the metasediments form a broad open syncline plunging northwards, while in the eastern end of the island the rocks were tightly folded into a small anticline and syncline compressed within the axial zone of a broader syncline plunging into NNE direction. From the aerial photograph, several lineaments were traced. The lineaments are trending in the NNE-NE and NNW-NW directions. The lineament directions are in very good agreement with the observed faults and shear zones. Joint analyses indicate that there are five joint sets in the area, two of them partly filled by quartz to form quartz veins. Based on the field relationship of the structures observed, it is interpreted that the metasediments have undergone two phases of compression before the igneous intrusion, which took place during Jurassic-Cretaceous time. Following that, a tensional phase was responsible for normal faulting and quartz veins. The last compression took place in the area during Early Tertiary and resulted in the lateral faults and shear zones. This activity was also responsible for the formation of the foliation in the quartz porphyry.

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