

## **Source of the Batu Pahat magnetic anomaly**

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An almost circular magnetic anomaly north of Batu Pahat town is made up of a pair of magnetic high and magnetic low. It is a typical magnetic anomaly at this magnetic latitude with magnetization in the earth's field direction where the magnetic high is situated to the north and the magnetic low to its south. The magnetic anomaly has been generally associated to the Batu Pahat granite which outcrops east, west and south of the town. However, the location of the anomaly only at the northern tip of the granite mass suggest that it is not the source. The geological study indicates that gabbro is present within this magnetic anomaly area. Modelling of the anomaly indicates that two source bodies produce the anomaly. The first is situated where the gabbro is located and the second body is located slightly to the north. This location was formally a bauxite mine. The first has its top at about 50 to 100 meters depth while the second body has its base at less than 100 meters. The deeper body is presumably associated with the gabbro while the second body is probably of sedimentary origin. The Batu Pahat residual magnetic anomaly map suggest that the short wavelength anomalies present are associated with shallow fracture system having orientation similar to that of the existing faults trend in the granite.

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