

Aeromagnetic Anomalies over Hyderabad Quadrangle

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The Hyderabad Quadrangle constitutes mainly a granitic terrain, except in the south west where step like topography is prevalent in the basalt country. This step like topography is evidenced by Aeromagnetic data by showing some fault like profiles.

The granitic terrain was intruded by basic dykes of Proterozoic age and covered locally by Deccan traps. By using aeromagnetic data over Hyderabad quadrangle several profiles have been taken in different directions. These profiles reveal that the existence of dyke like bodies below the granitic terrain. Some faulted topography is existed within the basaltic terrain in west side. The aeromagnetic image shows high magnitude along NW-SE direction. Relatively high magnitude anomalies also present in the NE corner.

There is a break in the continuation in the high magnitude anomaly pattern between Sangareddy and Hyderabad in NW-SE direction, this may be because of some tectonic activity in which basalt is extruded to the surface.

The aeromagnetic profile over Hyderabad city shows a magnetic high surrounded by magnetic lows. The profile along N-S near west side at 17.40° shows may be a fault. The profile along N-W near east at 17.25° - 17.55° shows a symmetric anomaly which implies may be a spherical body with a dip of the magnetic field nearly 90°.

The aeromagnetic anomaly pattern confirms to the geology and structure of the subsurface with our study.

Reference:

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