# Lineaments in enhanced remote sensing images: An example from the Upper Perak Valley, Perak Darul Ridwan

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Linear structural features (lineaments) mapped from remotely sensed images are often used as indicators of fractures in near-surface rocks. Previous lineament mapping and interpretations of Malaysia have used aerial photographs and relatively unenhanced satellite images. Images covering the Upper part of Perak River Basin have been produced from LANDSAT MSS data using several digital image processing techniques, particularly filtering, intended to enhance the visibility of lineaments. The contrast stretched of MSS band 7 was found to be the best in displaying lineaments for the area, hence, was further processed by using directional filters. The four directionally filtered images, which contain lineaments in EW, NS, NE-SW and NW-SE direction, were used for lineament mapping. All lineaments longer than 1 km were traced and mapped at scale 1: 250,000; their orientations were determined and lengths measured, and further analyzed by preparing rose diagrams for analysis, interpretation and comparison with published maps. Fracture analysis of the mapped lineaments was carried out together with its relation with rock types and mineral deposits in the study area. A good correlation, both in terms of direction and location, do exist between image lineaments and previously mapped faults. In addition, new prominent lineaments which are probably newly identified faults were delineated and recorded along with new circular features, thus, updating the structural geologic map of the area as well as to facilitate the planning of mineral exploration and identification of new mineral deposits.



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