

## REMOTE SENSING STUDY OF PAYUN MATRU VOLCANO

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The purpose of this work is to identify compositional and textural differences between lava flows of the Payún Matrú Volcano; using Remote Sensing Techniques: TM- Landsat images and aerial photographs. The volcano is crowned by an 8 kilometers wide caldera. In it sequences of cenozoic lavas (pliocene-pleistocene) of trachyandesites, trachytes and basaltics composition are present. Outflows outside the caldera (both rock types) preserve their original flow shapes. The TM Landsat image was submitted to a digital treatment and visual interpretation. Digital Process to the image: Color Composition, Geometric Correction, Histogram Equalization, Filtering, Principal Components Analysis, IHS transform ,etc. Aerial photograph Data was used to make a mosaic for visual interpretation. The image data and aerial photographs were merged, this product keeps spatial resolution of aerial photographs and adding spectral resolution of Landsat image; - with a reasonable level of detail -; allowing to identify structural and lithological characteristics of lava flows. The application of this methodology was verified by previous field work on this volcano. The results reached are satisfactory.