

## **INVESTIGATION OF VILLA ALOTA - PASTOS GRANDE VOLCANIC AREA IN BOLIVIAN ANDES USING RADARSAT**

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The Villa alota - Laguna Pastos Grande study area is located in the major Cenozoic volcanic tectonic province and represents an effusive andesitic - dacitic volcanism that became active in late Tertiary and that waned in the late Miocene. The average altitude of the study area is between 4,500 m and 5,400m above sea level and it is one of the driest parts of the world. Geologically there are also numerous dried evaporite lakes. In this study we first studied generating accurate DEM using RADARSAT (Standard mode) stereo image pairs and carried out an integrated study of the geological processes. We also took a number of evaporite lake samples for geochemical analysis. In addition to the local geology maps and RADARSAT data, we also utilized Landsat TM data. Preliminary results of the study indicate that (i) RADARSAT standard mode DEM is accurate enough for most geological applications, particularly for the areas where no detailed topographic maps are available, (ii) large scale volcanological features such as collapsed caldera could easily be identified and mapped, and (iii) some of the evaporite can be mapped but not all dried lakes clearly appear on the remote sensing data. This study is still in progress.