

GEOLOGICAL APPLICATION BASED ON SPACEBORNE (RADARSAT AND LANDSAT) AND AIRBORNE (MAGNETOMETRY) DATA INTEGRATION IN SIERRA DE LA VENTANA - CORDON DEL SERRUCHO REGION, RIO NEGRO PROVINCE, ARGENTINA

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Optical and SAR imagery and geophysical data were integrated in the Sierra de La Ventana - Cordon del Serrucho region, in order to evaluate their geological applications. The morphological features, as well as the geological framework, are described. The methodology applied consists of merging and analyzing data from optical and radar satellite imagery. The material used was Radarsat Beam 6 ascending imagery and TM 232/089 image. Image processing steps are given in detail and the main results from the interpretation are described. SAR image highlighted the regional structure, faults and thrust faults; SAR and TM integration images produce higher sharpness in forested areas, enhancing topography, although the lithological differences are not easily distinguishable; yet, outcrops could be seen in the El Bolson area due to the higher definition of thrust fault traces such as the backthrust of the Serrucho range, the thrust of La Veranada range and Hielo Azul, and the high sharpness of the folded structures of the Ñorquinco-Ñirihuau basin. Airborne geophysical data available for this area was analyzed and its interpretation was done jointly with the SAR and TM imagery.