In Indonesia's geological mapping carried out by conventional methods (how long) with a still relatively small scale of 1:250,000, while demand is high enough geological map with a larger scale 1:50,000. To complete the mapping of conventionally required a long time that is about 50-100 years. With advances in information technology, the use of remote sensing technology was applied to map the geological elements in the entire territory of Indonesia.

Geological Mapping using ALOS data in the mountains of south-central Java (Wonogiri regency) is one of the applications of remote sensing technology. This aims to obtain information about landscape, composition, shape of the Earth and particularly on the distribution of the existing rock.

The data used here is the ALOS image data, which is one of the applications of remote sensing science that is expected to provide information about the circumstances and elements of geology in a mountainous area south (Kab. Wonogiri - Central Java) with a large scale is 1:50000.

ALOS image data - AVNIR 2 which has a high resolution is processed and analyzed to obtain information about geological elements in the region with a scale of 1:50,000. ALOS data AVNIR-2 form that has resolution 30m DEM is 10m, and processed
using ER Mapper 7.0 software, for correcting the geometry data with maps AVNIR-2 RBI Wonogiri and obtain Interpretation results. Interpretation is done manually Interpretation visual. Hopefully with a geological map with ALOS data, we can know the distribution of rocks and know that there is straightness.

Results from this study is the result of a geological map at 1:50,000 scale Remote Sensing away with, as well as geological information elements exactly in the mountains of south-Wonogiri Central Java. Interpretation of the results can be known if the area is dominated by the type of stone Gamping and there is an appearance of straightness rock (Lineaments).

*Keywords: Remote Sensing, ALOS, Geological Mapping*