The country of South Sudan is one of the largest areas on the planet that has not been geologically mapped with any great degree of certainty. The most complete geological map of the country is on a scale greater than 1:1 000 000 (Figure 1). These images were mainly produced using satellite imagery interpretation and produced during the 1980’s. As result of this there are large areas that have been mapped as Archean basement without any verification or justification.

One such example can be seen in the south eastern portion of South Sudan. This area has been historically mapped as basement. This was not however observed during an investigation of High resolution satellite imagery and subsequent surface investigations.

A High resolution satellite imagery investigation has revealed a number of unknown features, indicating significant structural features that are not traditionally associated with Archean basement complexes (Figure 2). As a result new observations have led to a more detailed geological map that more accurately depicts the geomorphological history of the area.
References:


Figure 2: Landsat image of south eastern area in South Sudan.