Geophysical Research Abstracts,
Vol. 10, EGU2008-A-01436, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-01436
EGU General Assembly 2008

Geological and structural studies by using remote sensing and GIS, East and northeast Syria

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This study focuses on the geological and structural studies by using remote sensing and GIS, in the east and northeast part of Syria. Studied area located:

39 E – 42˚15’ E

34 N – 37˚30’ N

The study deals with a variable data (geological, structural, satellites,).

6 Scenes of Landsat ETM and 42 scenes of Aster data were used in the study. Satellites data were prepared and mosaiced. Analysing satellites data enable us to separate the several types of lithology, which covered the area.

Digital elevation model (DEM) was extracted with resolution 90m. DEM was analysed in order to extract slope, aspect and relief maps. Low and high pass filters were applied on DEM to shows the structures unit on the area, which enable us to modify the structure map of the study area. We have detected faults and lineament feature that covered the study area.

Now am working to establish the Geological map of the study area with scale 1: 200,000 in the help of satellites data and geological data. Until now I have finished about the half of this map, which I want to show it in the poster.

Three dimensional image (3D) was established for the area by using satellite data (Landsat ETM) and DEM., which shows the structure and geomorphic units.

In summary, main direction of faults is in N – NE which led to form Euphrates grab and separate Jabal Sinjar from Jabal Abdalaziz. The study was affected under strong regional faulting, which enable to leak some seeps in Albishry mountain area, which will be studied in detail in the next step of this project.