



Compilation of Gravity Anomalies of Turkey and Surrounding Seas

A. Ates (1), C. Sendur (1)

**1 (1) Ankara University, Department of Geophysical
Eng. Tandogan 06100, Ankara,
(ates@eng.ankara.edu.tr / Phone:
+90-0312-2126720 Ext:1276)**

Gravity survey of Turkey was completed with more than 62.000 measurements by the General Directorate of Mineral Research and Exploration (MTA) of Turkey. Gravity surveys of three seas, surrounding Turkey were done from the sea surface by the neighbouring countries. It is considered that the horizontal distance of the gravity measurements has 10 km interval in Black, Aegean and Mediterranean seas. An analogue gravity map was compiled for Turkey and surrounding seas. This map also includes gravity anomalies of Ukraina and Russia. Gravity anomalies of Syria were also added into the aforementioned map. This analogue gravity map was digitised to establish X-Latitude, Y-Longitude and Z-mGal values with using a 'CalComp' digitiser. Anomaly values digitised in a computer environment were gridded with 0.1 degree interval along X and Y directions. Spectral analysis was performed to check the resolution of the data. Observed spectral peak indicates that the bottom of the anomalous masses can be detected and that the data quality is good enough.

Simple 2.5 dimensional crustal models were constructed along profiles taken from the reconstructed gravity anomaly map. Densities of 3.15 and 2.85 gr/cm³ values were found to be suitable for the oceanic and continental crusts.