

Topic: **Base Magnetometer Operation**
Audience: Afghanistan Geological Survey (AGS) Geophysics Team
Ministry of Mines & Industries (MMI) - Oil and Gas Exploration Office*
Participants: 10
Duration: 20 hours
Delivered: Two times: June 1-6 and June 12-14*
Instructor: Charles Lindsay (USGS)

Summary:

Participants received hands-on training while operating a Geometrics G-856 (and GEM Systems GSM-19*) proton precession magnetometer in order to observe and document diurnal variations in the Earth's total magnetic field. A laptop computer running Microsoft Windows XP and Geometrics MagMap 2000 was used to download data from the magnetometer. The experiential training focused on:

- 1) appropriate base magnetometer site selection
- 2) system set-up
- 3) field operation – manual and automatic modes
- 4) troubleshooting and basic maintenance
- 5) data retrieval
- 6) data archiving

After the training, participants independently operated a base magnetometer on a daily basis of the course of 3½ months. This equipment supported a contemporaneous aeromagnetic survey of Afghanistan by monitoring the local effects of diurnal variations and magnetic storms on the Earth's magnetic field. This data was used to correct the simultaneous field measurements that were collected by an airborne magnetometer.

Participants:

Mohammad Alam
Said Ashan
Faizulla
Sardar Hussain
Nassima Jan
Abdul Hakim Kohistany
Abdul Salam Muty*
Ghulam Rahman
Ghulam Sakhi
Mohammad Zia