GEM Advanced Magnetometers Company Presentation

Our World is Magnetic.



www.gemsys.ca



GEM Systems Inc.

• **World leader** in developing and producing geophysical equipment for mineral exploration, focused **exclusively** on magnetic technologies (scalar quantum systems)

- Established in 1980
- The headquarters and production lines are located in Ontario, Canada
- We have a wide range of distributors of our equipment all over the world





GEM Systems Success

- **Development** of **top technologies** with the highest standards of sensitivity and absolute accuracy
- Strong Technical and Service support
- **Customers** in more than 150 countries all over the World
- **Focus** on what we do best develop magnetic instruments only
- Continually work on improvement based on GEM innovation & customer feedback



GEM Systems Magnetometers

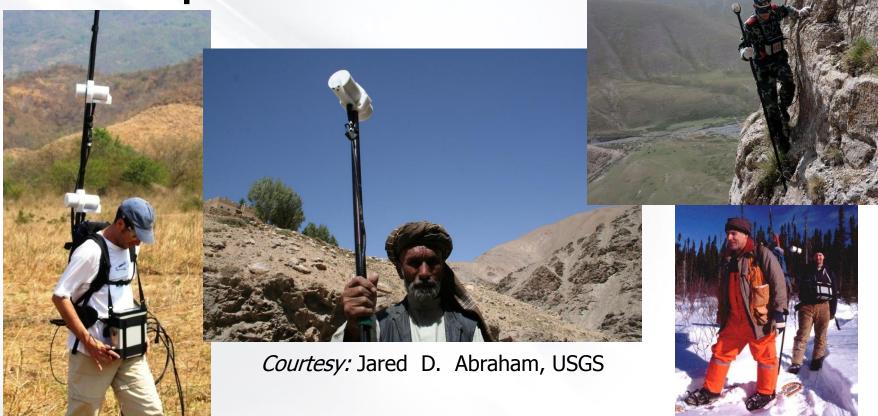
Applications:



- Mineral Exploration (Airborne and ground surveys)
- Near Surface Geophysics
- UXO
- Magnetic Observatories
- Earthquake Research
- Volcanology
- Archaeology
- Scientific Research



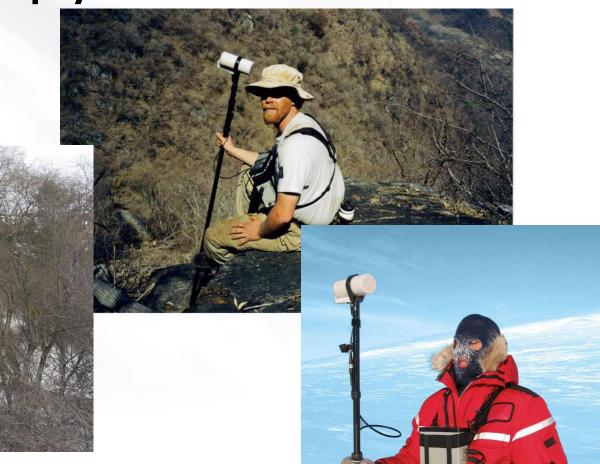
Mineral Exploration



"Quantec Geoscience has used GEM's advanced magnetometers for many years to assist in the discovery and delineation of economic ore deposits."



Near surface geophysics





Magnetic Observatories



"The US Geological Survey uses GEM Systems magnetometers at **all** of its Magnetic Observatories. We are very happy to have such an accurate, reliable magnetometer"

Alan M Berarducci, USGS.



Earthquake Research and natural hazard monitoring Uaxaca - México

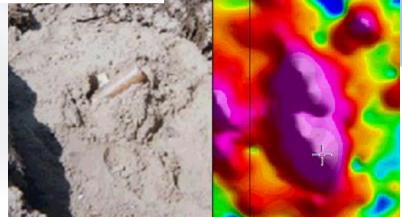








Concrete bunker



10 sensor Airborne

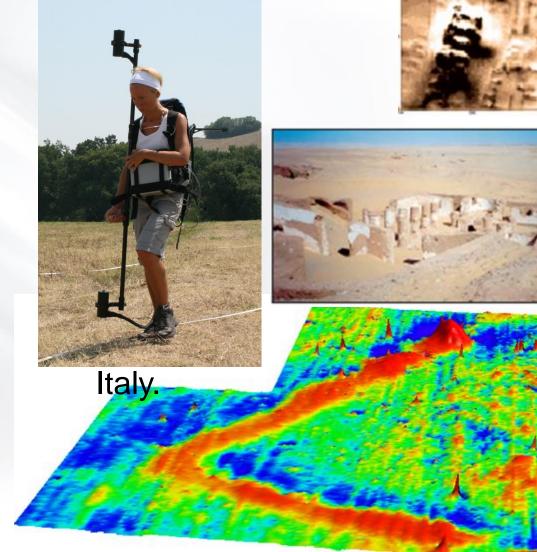
Artillery shell 0,5 m



Archaeology



Egypt. Archaeologist Dr. Tatiana Smekalova





- Airborne and ground systems (mobile and stationary)
- Proton Magnetometers Gradiometers
- Overhauser Magnetometers
 Gradiometers
- Potassium Magnetometers Gradiometers





GEM Systems' Equipment. Walking Proton Magnetometers / Gradiometers



- High sensitivity 0.15 nT @ 1 Hz
- Memory for 5 million readings
- Programmable base station (Daily and Flexible scheduling; Immediate start mode)





GEM Systems' Equipment. Overhauser Magnetometers / Gradiometers



The new technology provides :

- 0.022 nT @ 1 Hz sensitivity (Optional 0.015 nt @ 1 Hz)
- High gradient tolerance
- Minimum heading errors
- "Clean" geophysical signal
- Ultra-Fast operation
- High absolute accuracy
- Ability to combine Magnetometer / Gradiometer / VLF / GPS positioning



GSMP-35 Version 8.0 Potassium Magnetometers / Gradiometers for Ground Exploration

The best instrument for mapping of subtle geological signals

- Highest sensitivity at 0.0003 nT at 1 Hz
- Low power consumption up to 16 hours of continuous operation per charge
- Light weight and compact design
- Gradient tolerance 50,000 nT/m
- Fast sampling up to 20 Hz; Ideal high resolution surveys
- Integrated backpack: convenience and high productivity
- Proven reliability based on 28 years of R&D





Global GPS Options

Enhanced GPS positioning resolution

- Standard GPS: <0.7m
- High resolution GPS Option:
 <0.6m SBAS (WAAS, EGNOS, MSAS)
 <0.6m OmniStar (VBS2 subscription)





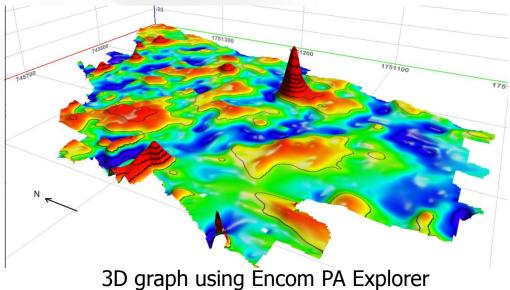


Software and Modeling

End-to-End solution for:

- Transferring data rapidly to PC
- Applying diurnal corrections
- Visualizing data in 1D, 2D and 3D for quick quality control (QC)
- And first-level analysis
- Modeling single or multiple anomalies for Interpretation

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- THANK YOU
- GRACIAS
- OBRIGADO
- GRAZIE
- спасибо

