

---

**IUGS-IFG & AFP**  
**Two-Day Training Course on the Design, Management and Implementation of**  
**Ground Searches for Burials**  
**Queensland Police Training Centre, Brisbane, Australia, 8-9 August 2012**

IUGS-IFG and AFP organised and delivered a training course on forensic geology and search, held at the Queensland Police Training Centre in Brisbane, Australia, on 8-9 August 2012. The course was called the 'Design, Management and Management of Ground Searches using Geophysical Equipment'. This training followed the 34th International Geology Congress, Forensic Geoscience Symposium, which was held on 6 August 2012, also in Brisbane. The training course was delivered to approximately 25 selected delegates comprising forensic and major crime investigators, anthropologists, archaeologists, detectives and forensic scientists. Attendees represented the Australian Federal Police, Queensland Police, Western Australia Police, Victoria Police, Brazilian Federal Police, Netherlands Police Agency and Japan Criminal Investigation Bureau. The training was designed and delivered by Laurance Donnelly, Mark Harrison Nick Barrett, Rob Fitzpatrick, Shari Forbes, David Nobes and Jennifer McKinley. A series of knowledge transfer lectures were followed by operational and practicable field based training sessions. The training focused on ground searches for homicide graves, fire-arms, weapons, drugs, money and items of value and it covered the following:

- Ground Searches: A Law Enforcement and Geological Perspective
- Historical Overview of Ground Searches
- Search Objectives
- Search Types
- Search Philosophy
- Systematic Standard Operating Procedures
- Behavioural and Geographic Models
- Conceptual Geological Models
- Diggability
- Search Methodologies
- Search Assets and Instrumentation
- Search Design, Management, Operations and Logistics
- Search Recording and Recovery
- Communication

IFG received positive feedback from the AFP delegates. A series of theoretical lectures prepared the officers for the field based practical session. As part of this training officers became familiarised with a variety of conventional geophysical search equipment (confidential) and innovative techniques used to assist with ground based searches for burials. The field session provided the opportunities for the applications of the course work. This enabled officers to conduct and record geological and geomorphological observations, determine diggability, develop RAG (Red-Amber-Green) search area prioritization maps, develop conceptual geological models, determine preservation and decomposition potential, determination of the optimum search assets, identify optimum search methodology and data management techniques using GIS.

## Programme and schedule

### Proposed Programme for Day 1: Wednesday 8<sup>th</sup> August 2012: Theory (morning session)

Chair: Mark Harrison/Laurance Donnelly

SPEAKER	TITLE	TIME	DURATION*
Mark Harrison	AFP, welcome and introductions	10:30	10
Laurance Donnelly	IUGS-IFG and training objectives	10:40	10
Laurance Donnelly	History and overview of search for burials	10:50	15
Rob Fitzpatrick	Overview of the Geology of Australia	11:05	15
Shari Forbes	Preservation, decomposition of human remains and targets	11:20	15
Nick Barrett	Search capabilities in the AFP and police/judicial system	11:35	15
David Nobes	Geophysics and ground searches	11:50	15
Jenny McKinley	GIS, geostatistics and data management	12:05	15
Mark Harrison	Discussions	12:20	10
<b>LUNCH</b>		13:30	90

### Proposed Programme for Day 1: Wednesday 8<sup>th</sup> August 2012 Practical at test site (afternoon session)

Chair: Laurance Donnelly/Mark Harrison

TRAINER	ACTION	TIME	DURATION*
Mark Harrison	Hypothetical search case and items/objects to be located	14:00	10
Rob Fitzpatrick	Geology and soils at AFP Brisbane control/test site	14:10	10
Laurance Donnelly	Conceptual geological model, diggability, RAG prioritisation	14:20	10
Shari Forbes	Recovery of positive anomalies and indications	14:30	10
Harrison/Donnelly	Behavioural profiling, Police data bases and Winthrop theory	14:40	10
Donnelly/Harrison	Search strategy and methodology	14:50	10
Jenny McKinley	Search recording and management	15:00	10
D Nobes/N Barrett	Operational use of geophysical equipment	15:10	60
Mark Harrison	Discussion, objectives for day 2 and close	16:10	20
<b>CLOSE</b>		16:30	-

### Proposed Programme for Day 2: Thursday 9<sup>th</sup> August 2012: Practical (morning session)

Chair: Laurance Donnelly/Mark Harrison

TRAINER	ACTION	TIME	DURATION*
All	Establishment of geophysical controls and search cordon/lanes	09:30	180
<b>LUNCH</b>		12:30	90

### Proposed Programme for Day 2: Thursday 9<sup>th</sup> August 2012: Practical (afternoon session)

Chair: Mark Harrison/Laurance Donnelly

TRAINER	ACTION	TIME	DURATION*
All	Search, locate and record	14:00	180
All	Debrief	17:00	10
Delegates	Feedback	17:10	10
Mark Harrison	Close	17:20	10
<b>CLOSE</b>		17:30	-

## Photographs



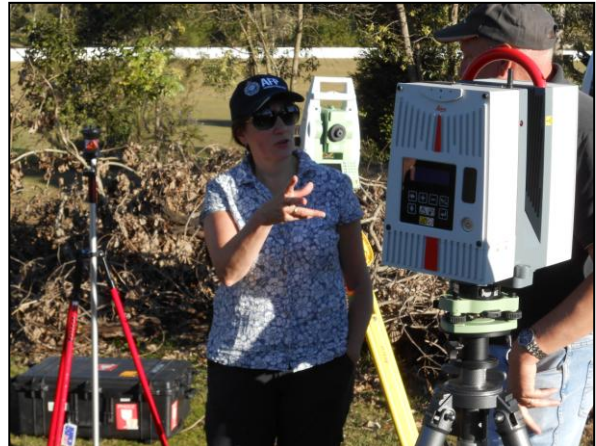
Commander Mark Harrison providing knowledge transfer



Mr Nick Barrett (AFP) provides a brief for field training



Dr David Nobes demonstrates the EM38 and MD2000



Dr Jennifer McKinley discusses surveying and GIS



Dr Laurance advises on the development of a Conceptual Geological Model for burials



Prof Shari Forbes and AFP discuss preservation and decomposition of human remains





Australian Federal Police delegates



Australian Federal Police delegates



Prof Rob Fitzpatrick & Dr Laurance Donnelly demonstrate diggability



Awaiting the deployment of GPR



Field applications of the EM38



Field applications of GPR