The Frank Arnott Award Innovation in Data Visualisation & Integration

FAA COMMITTEE

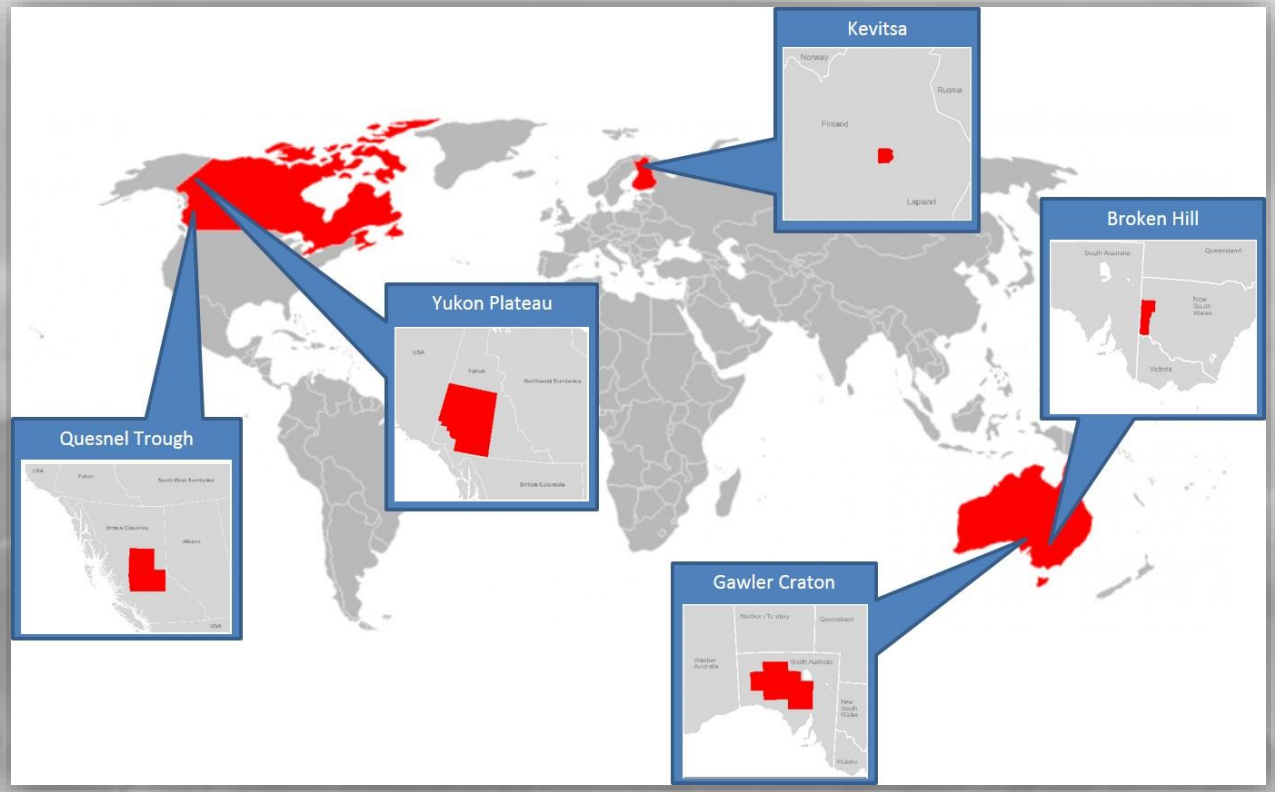
Tim Dobush-Geosoft
Maria Nicolaidis-Geosoft
Theo Aravanis-RT
Dave Pratt-Tensor
Ken Witherly-Condor

This award honours Frank Arnott (1951-2009) who was an exceptional exploration industry leader. He championed innovative techniques that maximised the value of the multidisciplinary data that underpins exploration campaigns.

"I was particularly interested to see 3D creeping in to presentations, although acceptance is still slow. "

Comment from Arnott after reviewing Exploration 07 proceedings early 2008

Recognizing that effective data integration and visualisation of our data sets remains one of the biggest challenges, we are holding a ‘collaborative‘ challenge, focused on innovation in data integration and visualisation



Five world class exploration datasets have been collated so participants may choose the different geological scenarios to analyse and interpret.

Judges:
Dr. Donna Kirkwood
Mr. Joel Holliday
Mr. Steve Hunt
Dr. Bill Morris




Special THANKS to the FAA sponsors

Condor Consulting, Inc.

DASSAULT SYSTEMES

RioTinto

Fullagar Geophysics Pty Ltd

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Tensor Research

GEOSOFT

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FRIENDS OF FRANK

Special THANKS to the FAA dataset providers

Government of South Australia

FIRST QUANTUM MINERALS LTD.

NSW GOVERNMENT

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YUKON GEOLOGICAL SURVEY

FAA WINNERS

Experienced

1st Place: Logan's Legends
Vicki Tschirhart, Peter Tschirhart
R. Montsion, Benoit Saumur,
Pedro Acosta Gongora, Michael Gadd

2nd Place: Deep on Data
Telma Aisengart, Alex Fuentes,
Jose Luis Ando, Edward Lewis,
Nigel Halsall, Paul Turner,
Peter Pitfield, Slawomir Wojcik
Taronish Pithawala

3rd Place: Uncover Australia
Mr Simon van der Wielen, Dr. David Champion,
Dr Karol Czarnota, Mr. Adrian Fabris, Dr
Caroline Forbes, Prof. David Giles,
Mr. James Goodwin, Mr. John Keeling
Mr. Alan Mauger, Mr. Malcolm Nicoll
Dr. Roger Skirrow, Dr. Stephan Thiel

Apprentice

1st Place: On the Rocks, University of Adelaide
Jianan Chen, Larissa Collins, Ben Kay, Kiryeong Lee, Racheal Mahlknecht, Sarah McDonald, Angus Nixon, Michael Rieger, Teagan Romyn , Melissa Stinear, Jamieson Woolcock

2nd Place: University of Saskatchewan
Colton Vessey, Ty Magee
Matthew Nadeau, Austin Castle

3rd Place: Team Macquarie
Tasman Gillfeather-Clark, Luke Smith, Byron Gear

UNCOVER AUSTRALIA

FAA & geoscientist 'readiness'

PDAC 2018

2 March - Toronto

Robbie Rowe – NextGen Geological & UNCOVER

Geoscience community engagement

UNCOVER AUSTRALIA

- Australian mineral exploration community increasingly engaged over last 8 years on improving exploration performance undercover
  - UNCOVER 2010 Theo Murphy thinktank
  - AMIRA undercover (industry) roadmap (2 stages) 2014-2017
    - Theme 6 - education & training identified
    - http://www.amirainternational.com/WEB/site.asp?section=activities&page=ExplorationUnderCover-STAGE2-RegistrationForm
- 2018 in response to FAA IBA type award & associated graduate readiness issues, senior industry members engaged and invited for opinion & input

AMIRA roadmap results

UNCOVER AUSTRALIA

- Roadmap identified gaps in geoscience capability & capacity specific to minerals exploration -Theme 6
- Post 2000 greenfield – brownfield transition
  - Steady decline in the number of industry geoscientists exposed to large-scale targeting programs & data sets.
  - Impending problem, skills shortage as older generation retires
- Identified need for new training programs, proposed structured program to engage industry;
  - What kind of training is being delivered in-house T6.1
  - Complete survey to determine future training requirements T6.2
  - Review current available training & complete gap analysis T6.4
  - Recommend enhanced ***or*** new training needs T6.5
  - Develop potential industry scholarship programs T6.6

AMIRA INTERNATIONAL
Delivering solutions through collaboration

AMIRA roadmap results – Changes ID

UNCOVER AUSTRALIA

Change Required	Resulting Transformation
Priority	Elevate overcoming the cover challenge to highest strategic importance
Approach	New entity, open operating model, greater collaboration, better thinking, innovation adoption, maximise knowledge-technology diffusion and rapid transfer
New knowledge new toolkits	Better science, new knowledge, higher quality data, new technology and tools, increased collaboration, improved integration
People investment	New training, future skills, gender balance, increased diversity, boundary spanning
Economic outcomes	More high-quality discoveries, increase exports, create jobs, enhance regional infrastructure, technology commercialisation and export new technologies and services, improved efficiency and performance, generate more wealth
Social outcomes	Employment growth, targeted regional development, self-sustaining communities
Environmental outcomes	Smaller environmental footprint right across the minerals value chain, better targeting, increased effectiveness, responsible development

People investment

- *New training*
- *Future skills*
- *Gender balance*
- *Increased diversity*
- *Boundary spanning*

http://www.amirainternational.com/WEB/site.asp?section=activities&page=ExplorationUnderCover-STAGE2-RegistrationForm

Education community response - NExUS

UNCOVER AUSTRALIA

- Commenced 2016, designed by Uni Adelaide with support from SA gov & MCA.
- x2 courses completed, 2016 & 2017
- Recognition of need for early career geoscientists to be trained for effective undercover targeting & exploration
- Strong alignment with outputs from Roadmap
- Limited intake (30 early career geoscientists) in 3 week teaching & practical field work training environment
- Strong cross industry support and involvement in program
  - majors, mid size and junior companies

NExUS
National Exploration Undercover School

https://www.nexus.org.au/

The Frank Arnott 2.0
PDAC 2020

THANK YOU!