



## **Mars, asteroids and 3.5 billion year old fossils to feature in conference mega-program**

**2008 Australian Earth Sciences Convention**  
**20-24 July 2008, Perth**  
[www.iceaustralia.com/aesc2008](http://www.iceaustralia.com/aesc2008)

*Article published in Gold and Minerals Gazette*

While some involved in the resources sector spend every waking moment monitoring shareables and chatroom sites for the next Poseidon, the 2008 Australian Earth Sciences Convention will also cater to those interested in bigger issues such as the origin and future of life and the Universe.

One of the conference's streams – *The evolution of life and the Solar System* – will make a significant contribution to the Convention's melting pot of hundreds of topics, and provide delegates with 'astronomical' value from their attendance.

“There are not many conferences where you can listen to a mining company executive in one session and then a representative from NASA in the next” says Dr Marc Norman from the Research School of Earth Sciences at the Australian National University, and convenor of the Convention's planetary sciences stream.

“But that is exactly what is happening at the Australian Earth Sciences Convention. Our stream will be covering topics as diverse as:

- meteorite and asteroid impacts in Australia, and their geodynamic consequences
- 3.5 billion year old fossils and micro-fossils, and what they can tell us about Earth's evolution
- evidence of mass extinctions on Earth
- impact as a geological process and its significance in economic geology
- the formation of the inner Solar System: new insights revealed by spacecraft data

- early planetary differentiation – the formation of crust, mantle and core on the Earth, Moon and Mars
- what we can learn about comets and the Sun from samples returned to Earth by recent spacecraft missions
- international geoscientific drilling projects, including in Western Australia’s Pilbara region

“The Convention will also be well placed to provide cutting-edge analysis of the groundbreaking information that NASA’s latest Mars Lander mission has been beaming back to Earth.

“We are very fortunate to have Dr Jeffrey Taylor, Research Professor at the Hawai`i Institute of Geophysics and Planetology, as a keynote speaker at the Convention. He is an internationally-renowned expert on Mars and we expect he will be very keen to talk about the latest mission.

“It’s an incredibly exciting time for geoscientists involved in space exploration. Today’s technology – and the advent of regular unmanned missions to planets like Mars – means we are able to get much closer to these planets than we have ever been able to before.

“But our stream at the Convention will not only focus on planetary science from a purely academic viewpoint. There is a strong link in our program between large meteorites that hit Australia millions of years ago and the future of Earth and the Solar System. In addition to causing mass extinctions, for example, there are intriguing hints that large impact events can contribute to mineral and hydrocarbon deposits or create hydrogeologic pathways.

“And given Western Australia is a treasure trove when it comes to asteroid and meteorite impacts, this year’s Convention is also well-placed to consider the ‘big issues’ from a local perspective.”

### **Geohazards and water exploration among hundreds of topics**

The extremely wide-ranging program at the 2008 Australian Earth Sciences Convention will feature a smorgasbord of other topics, including:

- what parts of Australia (and what infrastructure assets) are most likely to be affected by tsunamis, and the role of the Indian Ocean Tsunami Warning System in relation to this risk
- volcanoes, earthquakes, landslides and other seismic hazards in Western Australia, Australia and the Asia-Pacific region
- 3D modelling of natural hazards
- groundwater and mineral exploration: same approach, different targets

- groundwater contamination in the Himalayas and the USA
- acidic groundwater: its distribution, causes, risks and treatment
- salinity
- environmental degradation
- food contamination and traceability
- infrastructure planning and contamination management, and the role of land use geoscience in urban planning
- the formation of super-continent and super-mountains
- marine eco-systems
- geo-tourism

“These few topics do not even go close to illustrating the full extent of the Convention’s program” says Dr Jon Hronsky, Director of the consulting group Western Mining Services and the Convention’s Program Director.

“More than 450 presentations are being delivered across 4 days at the conference – that’s more than 110 papers being delivered each day across five major streams! What this adds up to is a bonanza of topics and a truly unique conference.”

**The full program and registration information for the 2008 Australian Earth Sciences Convention can be found at [www.iceaustralia.com/aesc2008](http://www.iceaustralia.com/aesc2008). A brief overview of the Convention program can be found on the Media page of the website.**