



PRELIMINARY PROGRAM

DAVID GROVES SYMPOSIUM New Insights in Mineral Deposit Understanding

SYMPOSIUM New Technologies and Approaches in Mineral Exploration

SYMPOSIUM Tectonics, Basins and Resources

Plenary Speakers

Richard Sillitoe

Exploration in and under lithocaps

Dan Wood

Growth in resources demand post-WW2 and future exploration implications

Keynote Speakers

Richard Goldfarb

Gold deposits in metamorphic rocks: new insights or steps backwards since FUTORES I?

Steve Cox

The dynamics of fluid pathways during injection-driven failure in high fluid flux regimes: insights from ore deposits, seismicity and numerical simulations

David Cooke

Porphyry Cu-Au-Mo deposits

Jingwen Mao

Tungsten and tin deposits in China

Noel White

Low and intermediate-sulfidation epithermal deposits

Larry Meinert

Exploration for skarn deposits - major deposits and new strategies

Roger Skirrow

Iron oxide Cu-Au deposits: products of two tectonic settings and two fluids?

Cornel de Ronde

Modern seafloor hydrothermal activity

Joel Brugger

Transport of metals in hydrothermal fluids

Keynote Speakers

Doug Kirwin

Fifty years of looking at rocks

Jeremy Richards

Magma fertility indicators

Roric Smith

Exploration strategy, business planning and successful execution to compress timeframes of discovery

Symposium sessions include:

Vladimir Lisitsin (invited speaker)

Mineral System Analysis and Prospectivity Modelling for Exploration Targeting – Current State and Challenges

Arianne Ford

Fit for purpose: A case study on the use of open file data vs closed file data for GIS-based prospectivity analysis

Travis Murphy

Augmenting prospectivity analysis with mining criteria: a test for viability

Carsten Laukamp (invited speaker)

Remote sensing for mineral exploration

Lee Robson

Accuracy of remotely sensed mineral maps for exploration: hyperspectral vs multispectral

Keynote Speakers

Allan Collins

McArthur Basin

David Giles

Mt Isa tectonics & deep drilling

Annette George

Carbonate sequences

Ross Large

Cycles of Ore Deposits and Mass Extinction Events - are they controlled by atmosphere oxygenation?

Symposium sessions include:

T. Blaike

Geophysical interpretation and modelling of the 3D structural architecture of the Batten Fault Zone, south-eastern McArthur Basin

Mark Hinman

Deep mining Queensland: a new view of structural-stratigraphic-magmatic, Cu-Au-Mo prospectivity in the southern Cloncurry Belt

John McLellan

Regional to local scale linkage of deformation events and IOCG mineralisation in the Eastern Mt Isa Block

Laurie Hutton

Characterising detrital zircons spectra across the Eastern Succession, Mount Isa and links to mineralisation



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David Leach

New insights into the relationships of evaporites with Mississippi Valley-Type Zn-Pb ores: a paradigm shift for exploration

Yasushi Watanabe

Rare metal mineralization in the Khaldzan Burgedei peralkaline complex in western Mongolia

Symposium sessions include:

Jerry Dunga

The mineralogy and geochemistry of porphyry stocks and dykes and their significance to hydrothermal alteration and gold mineralisation at the Mt. Percy gold deposit, Golden Mile, WA

Nick Oliver

Early gold introduction in two carbonaceous phyllite-hosted giants: Obuasi (Ghana) and Paracatu (Brazil)

Ioan Sanislav

Geita: Intrusive centres and Archean gold systems – an example from Geita Greenstone Belt

Paul Dirks

Geita: Tectonic setting of a giant Archean gold system – Geita, Tanzania

Marco Fiorentini / Vikraman Selvaraja

Atmospheric sulfur in the orogenic gold deposits of the Archean Yilgarn Craton

Alex Parker

Modelling of hydrothermal fluid compositions in the crust and upper mantle

Mamady Cisse

Mineralization and textural controls on primary gold deposits in the Siguiri Basin, Guinea

Mike Nugus

Controls on gold predominance at the La Colosa porphyry giant, Colombia

Shaun Barker

Chemical and mineralogical footprints around the Waihi low-sulfidation epithermal Au-Ag deposits, New Zealand

SYMPOSIUM New Technologies and Approaches in Mineral Exploration

Matthew van Ryt

Short-wavelength infrared spectroscopy as a tool for characterising hydrothermal alteration at the Geita Hill gold deposit, Tanzania

Rui Wang

White mica as a hyperspectral tool in exploration for Sunrise Dam and Kanowna Bell gold deposits, WA

Paul Duuring

Spectral signature of alteration zones associated with iron ore deposits in the Yilgarn Craton, WA

Chris Cuff (invited speaker)

Does underground coal gasification (UCG) have a place in clean coal technology?

Steve Micklethwaite (invited speaker)

Supercharging field geology - drones and artificial intelligence for ore deposits and structural mapping

John McLellan

Targeting epithermal systems by structural response

Clare Baxter

How can implicit modelling assist in speeding up the geological modelling process.

Stefan Vollgger

Ore shoot formation in an orogenic gold deposit

Jeremy Cook (invited speaker)

Application of high resolution seismic reflection to delineate low sulphidation epithermal vein systems - insights from Cracow

Simon Richards (invited speaker)

Results from an Atomic Dielectric Resonance (ADR) survey at Charters Towers.

Helge Behnson

Cu-Au fertility of arc volcanic rocks - a case study of the early Permian Lizzie Creek volcanics, NE Qld

Isaac Corral

Fertility assessment for Au-Cu of late Carboniferous - Early Permian volcanic rocks of the Townsville-Bowen region, NE Qld

SYMPOSIUM Tectonics, Basins and Resources

Laurie Hutton

Tectonic setting, geochemistry, and mineralisation linked to mafic rocks in the Mount Isa Inlier

Peter Betts (invited speaker)

What do continental reconstructions tell you about mineral systems?

Simon Johnson (invited speaker)

Metallogeny of the Capricorn Orogen, Western Australia

J. N. Guilliamse

Is there an unrecognised c. 1800 Ma mineral system in the northern Capricorn Orogen, Western Australia?

Jo Whelan (invited speaker)

Correlating basement terranes in the North Australian Craton, implications from a new study in the Arnhem Province, Northern Territory

Teimoor Nazari-Dehkordi

The Browns Range Metamorphics, Tanami region, Western Australia: A record of Mesoproterozoic crust within the North Australian Craton

M. V. McGloin

Broadening Paleoproterozoic tectonic and metallogenic models for the proto-Australian continent: examples from the Aileron Province, NT

Rick Valenta

Links between fault kinematics, unconformity geometry, orebody localization and orebody geometries in the South Alligator Valley, NT

Tiannan Yang

The Jinding Zn-Pb deposit: In the view of a field geologist

Kasia Sobczak (invited speaker)

Reassessing the cyclicity of volcanism and sedimentation in the Devonian-Carboniferous Drummond Basin, central Queensland

Christopher Todd

Detrital zircon geochronology of Late Palaeozoic to Mesozoic sandstones from Northern Queensland (Hughenden Region): implications for the evolution of eastern Australian basins

Valeria Bianchi (invited speaker)

High-resolution facies analysis and an unusual paleogeography for the Precipice Sandstone (Early Jurassic, Surat Basin)



FUTORES II

PRELIMINARY PROGRAM

DAVID GROVES SYMPOSIUM New Insights in Mineral Deposit Understanding

Angela Escolme

Productora Cu-Au-Mo deposit – a porphyry-related magmatic-hydrothermal breccia complex with local magnetite-apatite and porphyry mineralisation

Isaac Corral

The Capsize prospect, NE Queensland, Australia: geology, geochronology and geochemistry of a porphyry and associated lithocap

Fredrik Sahlström

Mt Carlton High Sulfidation epithermal deposit

Jaime Poblete

The Watershed scheelite skarn deposit, Far North Queensland, Australia

Kairan Liu

Wolfram Camp W-Mo-Bi deposit, NE Queensland, Australia

Stephanie Mrozek

Antamina skarn, Peru

Geoff Derrick

Double skarns and triple breccias – Geological evolution of the Mary Kathleen skarn system, NW Qld

Peter Illig

Breccia controls on the Red Dome Au-Cu-Ag Skarn Deposit, Chillagoe District, Far North Queensland, Australia

Zhiming Yang

Magmatic Au mineralization at the Bilihe Au deposit, China

Michael Fuss

Sr, C and O isotope compositions of carbonates in the Ernest Henry deposit, Qld, Australia: implications for genesis and exploration

Xinfu Zhao

Tectonic evolution and formation of the Preterozoic IOCG deposits in Kangdian, southwest China

Nicholas Dyrw

The nature of the volcanic edifice associated with a modern SMS deposit: insights from the Solwara 1 Cu-Au ore deposit

SYMPOSIUM New Technologies and Approaches in Mineral Exploration

Bob Loucks

The effect of magmatic oxidation state, hydration state and temperature on incorporation of cerium in zircon: bad news for Ce-in-zircon oxybarometry

Bob Loucks

Calibration of a new magmatic oxybarometer using Uranium, Cerium and Titanium in Zircon as a pathfinder to Cu-fertile arc igneous complexes

Phil Blevin

Timing, evolution and sources of magmatism associated with the Ardlethan Tin Mine, NSW Australia: a zircon based U-Pb, O, Hf and trace element study

Yanbo Cheng

The volcanic-plutonic connection and fertility of highly evolved magma systems: a case study from the Herberton Sn-W-Mo mineral field, Qld

Tony Christie

Evolving exploration models for epithermal Au-Ag deposits in the Hauraki goldfield, NZ

Adrian Fabris

Characterising footprints of the ~1.6 Ga thermal event in the eastern Gawler Craton - a case study from the Punt Hill region, SA

Jim Morrison

NE Qld revisited: using new and old tools to generate targets in mature exploration areas

Antonio Arribas (invited speaker)

Early-stage porphyry Cu-Au exploration: adding value to regional stream sediment surveys by studying fluid inclusions

Chris Torrey

Litho-geochemistry of pegmatites at Broken Hill: an exploration vector to mineralisation

Ravi Anand (invited speaker)

Future trends in geochemical exploration through transported cover

Richard Lilly (invited speaker)

Geochemistry through cover: defining geochemical exploration parameters for the Cloncurry Mineral District, Queensland

Eline Baudet

Geochemical footprint of the Bulldog Shale, Eromanga Basin, Australia: the tyranny of cover

SYMPOSIUM Tectonics, Basins and Resources

Bob Henderson

Tectonic controls on mineralization in northeast Queensland

Zhaoshan Chang

Geodynamic setting of epithermal-porphyry mineralisation in northern Bowen Basin, NE Queensland, Australia

Gavin Clarke

Age-dating of igneous rocks embedded with, and later intruding the Rangal Coal Measures at Hail Creek Coal Mine, North-east Bowen Basin

Gregg Morrison

The relationship between Orogenic Gold and Intrusion-Related Gold Systems in the Permo-Carboniferous of northeast Queensland

Zhaoshan Chang

Sn-W-Mo Mineralisation in NE Queensland, Australia

Courtney Dhnaram

The Early Permian gold mineral system of Cape York, North Queensland, Australia

David Huston (invited speaker)

Spatial variations in the distribution of lead isotopes in the Tasmanides, eastern Australia: implications for tectonics,

Ross Cayley (invited speaker)

Advances in Tasmanide tectonics – the giant Lachlan Orocline, a new predictive concept for eastern Australian mineral exploration under cover

T. J. Wells

Geochronological and geochemical evidence for two ore-forming events in the Northparkes district NSW

Dominic Brown

GSQ-GS NSW-GA Southern Thomson drilling program

Joel Fitzherbert

Southern Cobar-type Cu-Au-Pb-Zn-Ag mineralisation: turbidite-hosted intrusion-related mineralisation in central New South Wales

Julie Rowland

Inherited faults: their reactivation and influence on the localisation of arc-related epithermal systems



PRELIMINARY PROGRAM

DAVID GROVES SYMPOSIUM New Insights in Mineral Deposit Understanding

Steffen Hagemann (invited speaker)
The origin of BIF-hosted Fe ore mineral system

Caroline Perring
New evidence for controls on martite – microplaty hematite mineralisation at Mt Whaleback, Hamersley Basin, Western Australia: a holistic 3D approach

Harilaos Tsikos
Palaeoproterozoic banded iron formation (BIF)-hosted manganese deposits: myth or reality?

Xiangkun Zhu
Fe-Mg-B-isotopic constraints on the genesis of large-scale Paleoproterozoic B-(Fe) mineralization in NE China

Wenhong Qiu
Sulfur isotopic constraints on the origin of the Dajiangping SEDEX-type pyrite deposit, South China

R P Wilson
Rare earth mutants - Wolverine and other hydrothermal xenotime deposits, Browns Range, NW Australia

Paul Slezak
The Yangibana LREE deposit of the Gascoyne Province, Western Australia

Carl Spandler
Geology and evolution of the Toongi rare metal deposit, central NSW

Poster sessions include:

Jan Marten Huizenga
Hydrothermal Au mineralisation caused by fluid decompression and cooling in dilatational cavities

Hamidoddin Yousefi
Studies and examination of microthermometry involved followings and their speciality in patterns get from copper Andes – Kharestan gold, SE Iran

G-P Zeng
Electron microprobe (EMP) analysis of the antimoniferous minerals in the Zhazixi Sb-W deposit, South China

SYMPOSIUM New Technologies and Approaches in Mineral Exploration

Benjamin Andrew
3D mapping of fluid/rock interaction using oxygen stable isotopes, Mount Isa, Northwest Queensland

Dexian Zhang
LA ICP-MS Trace Element Analysis of Pyrite from Dabaoshan Poly-metallic Deposit of North of Guangdong Province: Implications for Ore Genesis

Richard Lilly
Pyrite variation within the Mount Isa copper system

Wenjuan Jia
Thermoelectric characteristics of pyrites of Yuku Mo deposit for mineral exploration, Henan Province, China

Huiqing Huang
Accurate and precise zircon U-Pb dating by LA-ICP_MS and SIMS

Alex Brown
Aspects of practical implementation of portable XRF in exploration

Christa Placzek
Climatic and tectonic controls on exhumation patterns and abundance of porphyry and supergene copper deposits: insights from millennial scale erosion rates

Poster sessions include:

Arianne Ford
A GIS-based prospectivity analysis case study for Sn-W mineralisation in north-east Qld

Behnam Sadeghi
Recognition of gold dispersion patterns in stream sediments using sinuosity index

Jose Luis Pacheco
Geochemical prospecting by Au and base metals on the Pucroj River sub-basin, Huanuco, Peru

SYMPOSIUM Tectonics, Basins and Resources

Chris Leslie
British Columbia metallogeny and exploration overview

Rob Holm
Tectonics and metallogenesis of Papua New Guinea and Solomon Islands

John Walshe (invited speaker)
Volato-thermal Au systems in the Late Archean - Core to the Crust

Jose Piquer
Porphyry Cu-Mo systems emplaced under contrasting tectonic regimes: examples from central Chile and SE China

Zengqian Hou
Recycling of metal-fertilized lower continental crust: Origin of non-arc Au-rich porphyry deposits at cratonic edges

Yitian Wang
Tectonic Controls on Regional Metallogenesis, Central China

Xue Gao
Lithospheric architecture of the Yidun Terrane and its control on metal

Poster sessions include:

Joshua Philips
Geochemistry of PGE enriched Proterozoic Dolerites of the southwestern United States

Chen Mao
Petrogenesis and geodynamic setting of a late Paleozoic A-type granite from the eastern Xingmeng Orogen, NE China

S Jargalan
Copper porphyry mineralization in South Mongolia: metallogenesis and magmatism



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Teimore Nazari-Dehkordi

Petrography and mineralogy of the Wolverine HREE deposit, Browns Range, Western Australia

Yanbo Cheng

Mt Carbine W deposit

Jose Veracruz

Gilberton District: An example of an intrusion-related gold system in North Queensland

Sidy Morin-Ka

Characteristics of the mineralizing fluid forming the John Galt heavy rare earth element (HREE) deposit

Yuling Xie

New understandings of rare metal deposits in China

Bradley Cave

U-Pb Geochronology of Apatite and Calcite at the Ernest Henry Deposit, NW Queensland; Implications for Hydrothermal Evolution and Ore Genesis

SYMPOSIUM New Technologies and Approaches in Mineral Exploration

L. Sunmonu

Interpretation of aeromagnetic data for mineral prospect in Igbeti-Moro area, Southwestern Nigeria

Thomas McCourt

Dynamic simulation for gas injection with varied grid geometries

Richard Lilly

The National Exploration Undercover School (NEXUS)

Sally Worbey

Future by-product recovery of speciality trace metals from IOCGs

Sandra Rodrigues

Hyperspectral techniques applied to coal characterisation

Sunjay Sunjay

Signal processing and image analysis of sonic logging data

James Hewett

The Association between Gold and Pyrite Trace Element Geochemistry at the Ernest Henry Deposit, NW Queensland

Cassandra Lintvelt

Mineralogy and Trace Element Geochemistry of Ag and Co in the Mount Isa Copper Orebodies, NW Queensland, Australia

SYMPOSIUM Tectonics, Basins and Resources

B Lin

Progress in mine exploration in the Duolong Ore District, Tibet, China

Jack Maughan

Geochemical evolution of the mafic volcanic sequences in the Cloncurry District, Queensland: implications for crustal accretion and prospectivity

Peter Downes

Pb-isotope signatures of the high sulfide Ag-Pb veins in the Broken Hill region: implications for metallogenesis