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UNIVERSITY OF TASMANIA

**Newsletter of the Centre for Ore Deposit Research
at the University of Tasmania**

This Issue:

December 1998

Sponsors

issn 1440-4109

Mineralisation associated with Ordovician volcano-plutonic rocks in central west New South Wales: a \$10 billion resource

Researchers at CODES and the Geological Survey of New South Wales (GSNSW), with collaborators from Monash University have begun a three-year SPIRT project with six industry sponsors (see box) aimed at producing a regional synthesis of Ordovician volcano-plutonic rocks in central west New South Wales.

These rocks contain an estimated resource of more than \$10 billion, and host several major ore deposits, including Goonumbla (north Parkes), Cadia, Lake Cowal

and Temora (Gidginbung), as well as skarn type deposits such as Browns Creek and Cadia Hill.

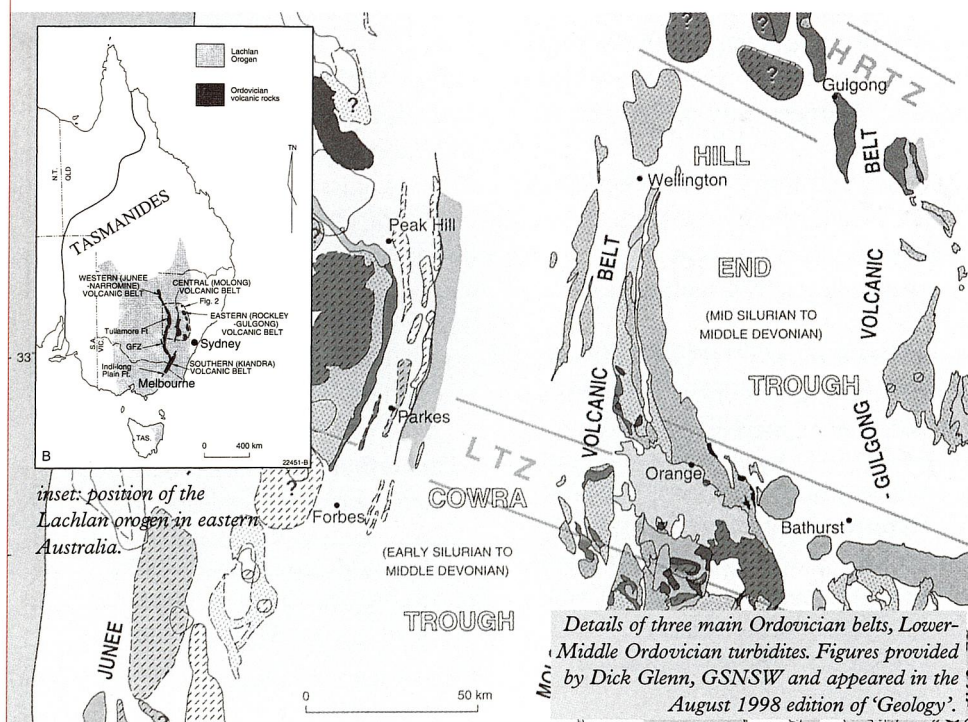
The tectonic setting of these Ordovician volcano-plutonic rocks has been highly controversial, and they have most recently been interpreted as having formed in an intra-oceanic island arc that underwent later (Silurian-Devonian) extension. However, there are still many gaps in existing knowledge and more research is needed to provide a more detailed synthesis of the regional geology.

Such a synthesis is a necessary prerequisite to developing a better understanding of these volcanic belts, as well as for devising new exploration criteria for locating mineralisation hosted in these rocks.

To address the multidisciplinary themes of the project, research is being conducted within a coordinated framework of four research modules:

- 1 Petrology & geochemistry
- 2 Structure, regional geophysics & tectonics
- 3 Volcanic facies architecture
- 4 Hydrothermal alteration & fluid pathways.

OS



Sponsors

Alkane, Goldfields, Hargraves Resources, Homestake, Newcrest, North, GSNSW.

Research Team

CODES

Tony Crawford, Dave Cooke, Sebastien Meffre, Leonid Danyushevsky, Rob Scott, Wally Herrmann, Jocelyn McPhee and students.

GSNSW

Dick Glen, Larry Barron, John Watkins.

Monash University

David Lambert, Carol Simpson, Ian Cartwright, Ray Cas.

From the Editor

For this final edition for 1998 we focus on the ongoing support we receive from our sponsors and project collaborators. In the special insert we list our gold and silver sponsors plus the three sponsorship packages available to industry, and we profile our sponsors' projects around the world.

Our relationship with industry has important ramifications for our students, as we found out earlier this year: we surveyed our postgraduate students to get a handle on why they chose to come to Tasmania to further their studies. We found that our excellent reputation plus ability to secure solid, funded industry projects was a key attraction, as is the calibre of researchers at CODES and the School of Earth Sciences. As well as helping to refine our advertising strategy, the survey has proven to us that industry partnerships help us attract the best possible students. The latest student intake is listed on page 6.

On the back page the contacts section shows only one change: Marilyn Feast is now coordinating the masters program and short courses so that Jess Tyler can progress with overhauling the web site and developing a new corporate brochure, as well as a range of new material and strategies.

Stay tuned in the New Year for our next Annual Report and Compendium of Research which will be an up-to-date round-up of 1998's activities and active research projects in 1998/99.

Have a wonderful Christmas break.

OS

ARC grant success

Bruce Gemmell, Peter McGoldrick: 'Sediment-hosted, structurally-controlled copper deposits: geology, genesis and exploration implications'. (SPIRT/APA-I/Western Metals)

Stuart Bull, Ross Large: 'Gold-rich volcanic-hosted massive sulfide deposits – Lewis Ponds'. (SPIRT/APA-I/Tri-Origin Australia)

Ross Large, Stuart Bull: 'Genesis of the Rosebery copper-zinc-lead massive sulfide deposit'. (SPIRT/APA-I/Pasminco)

David Cooke: 'Giant porphyry copper-gold deposits'. (SPIRT/APA-I/AMIRA; includes two scholarships)

Dima Kamenetsky: 'Novel applications of melt inclusion studies: insights into the magmatic history of porphyry Cu-Au deposits and provenance of volcanoclastic sediments'. (Post Doctoral Fellowship)

International workshop and field meeting: 2000

CODES program leaders Bruce Gemmell and Jocelyn McPhie are planning an international field conference on Volcanic Environments and Massive Sulfide Deposits for the year 2000. It will be field-based in Tasmania and will be co-sponsored by CODES and the Society of Economic Geologists, who will publish an accompanying field book.

News

Exploration group demonstrates Tasmanian potential

Ross Large recently participated in a Tasmanian Minerals Council Exploration Group panel discussion, exploring the shrinkage of greenfields exploration in Tasmania.

Chaired by consultant Kim Denwer, the session was titled 'If you don't seek, you don't find' and included Tony Brown (Director, Mineral Resources Tasmania) and drilling contractor Peter Sharpe.

Other presentations included discussions on:

- **Goldfields'** newly-discovered mineralisation at Henty.
- **Pasminco's** views on why they think western Tasmania is one of the most prospective areas in the nation plus their exploration program at Rosebery.
- **Mt Lyell Mining Company's** block caving methods.
- **Goldstream's** gold prospects at Corinna.
- **CODES** PhD student Oliver Holm's progress on the Arthur Metamorphic Complex.

A highlight of the meeting was Alistair Reed's (MRT) presentation on gold mineralisation in the state's north which tied in very nicely with recent and independent data gathered by AGSO.

More information about the presentations can be obtained from the Tasmanian Minerals Council on (03) 6223 8600.

OS

From the Director

UTas, UWA and JCU join forces to form the 'G3'

Centre for Ore Deposit Research, Centre for Strategic Mineral Deposits and Economic Geology Research Unit

Recent meetings between the Directors of Australia's premier economic geology research centres have resulted in a joint submission to the Minerals Council of Australia regarding the delivery of geoscience tertiary education to meet the needs of the Australian minerals industry. The consortium of the three geology departments and their associated research centres has been dubbed the 'G3'. Over the past four years, the G3 departments have produced between them 191 BSc(Hons) graduates, 76 MSc graduates and 88 PhD graduates in geoscience, 79% of whom have taken jobs in the minerals industry as either mineral explorationists or mining geologists.

The key elements of the proposal submitted earlier this month are:

- Developing a world-class MSc Coursework program in mining and exploration geoscience that will be integrated across the three universities and service the needs of the global minerals industry.
- Each institution will specialise in particular areas of the course and ore deposit and commodity types, depending on regional expertise and opportunities, but together will provide an integrated course, delivered by industry and academic leaders, using innovative delivery options.
- Linking the world-class Masters program to a revitalised BSc Honours program in geoscience which will relate to and support PhD programs in economic geology.
- At the undergraduate level a new integrated and practically-oriented course will be developed across the three institutions to cover the spectrum from exploration discovery, mine development, mineral economics, mining engineering, mineral processing and environmental management to provide students with a balanced understanding of the process from 'discovery to market'.
- Linking teaching with research, with staff involvement and equipment resources of the centres providing a unique opportunity to enhance the teaching programs and foster collaboration with industry.

The ultimate objective is for our BSc Honours, MSc and PhD programs to become internationally recognised for their quality and industry relevance, to attract a global population of students. This will both enhance the scope and financial viability of the programs. We expect that the G3 submission will be one of many received by the Minerals Council of Australia concerning cooperation in delivering university courses across the minerals education spectrum in mining engineering, metallurgical engineering and geoscience.

OS

CODES Special Publication 2 report from the workshop 'Basins, Fluids and Ores'

Features presentations by CODES staff and prominent international researchers, including Grant Garven, Jeff Hanor, Murray Hitzman, Wayne Goodfellow on major Zn-Pb-Ag deposits.

To Order

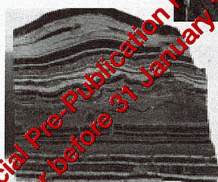
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ResearchProfile

Thick subaqueous pumice breccias: an example from the eastern Aegean, Greece.

from Sharon Allen

Thick sequences of pumice breccia form an important component of submarine successions that host VHMS deposits, such as those found in the Mount Read Volcanics, western Tasmania. However, they are often overlooked or misidentified because the glassy pumice is readily altered and compacted during diagenesis. Moreover, the origin of pumice in such ancient successions is often difficult to constrain due to poor or limited outcrop, tectonic overprint and post-emplacement alteration. CODES researchers are presently involved in defining the textural and lithological characteristics of subaqueous pumice breccias using a young, well exposed example (the Yali pumice formation) from the eastern Aegean, Greece.

The Yali pumice formation is a >170 m-thick succession of unlithified rhyolitic tube pumice that covers 2.8 km². Carbonate-cemented pumice breccia and fossiliferous limestone cap the formation, which indicates a submarine depositional setting. The formation has been up-faulted and is overlain by subaerial fallout.

The lithofacies characteristics help constrain the eruption style, depositional processes and proximity to source. In particular, the pumice forms moderately to well sorted, cm-m-thick beds, which include very little matrix (<20 wt% <1 mm). The coarser pumice clasts (64 cm-1.5 m) are very fragile and have quenched margins and internal polyhedral joints. They commonly occur in well sorted, tabular beds with no matrix or dense lithic clasts. They probably represent floating pumice, spalled from a vesicular dome or lava, that became water-logged and settled to the sea floor. The smaller pumice clasts are

prismatic and blocky and lack the surface features usually associated with quenching. These smaller pumice clasts are thought to be largely derived from disintegration of the coarser pumice clasts. They are the dominant component of lensoid and diffusely stratified beds, which were most likely deposited by short-lived submarine grain flows down the flanks of the growing cone.

Thus, a combination of dome growth and explosive eruptions produced the Yali pumice formation. Spalling of vesicular blocks from a frothing dome extruding on the seafloor was accompanied by relatively weak, partly steam-driven explosions. In this case, the thickness and uniformity of the pumice breccia reflects proximity to source.

This research suggests that thick successions of submarine pumice breccia can be generated by effusive intrabasinal volcanoes, and need not necessarily imply either an extrabasinal source or major pyroclastic eruptions. In addition, thick dome-related pumice breccias are likely to form proximal to source and accumulate rapidly, synchronous with eruptions.

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The Yali Formation, Greece: the lower part is dominated by stratified pumiceous pebbles and the upper part by tabular beds of coarse pumice. Section shown is 60 m high.



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sponsor projects

In our first three years (1997-1999), a consortium of twelve industry sponsors as well as Mineral Resources Tasmania joined the University of Tasmania and the Australian Research Council in supporting the new Special Research Centre in ore deposit research.

This corporate sponsorship program has been a vital part in our ability to assist the Australian minerals industry, and has helped CODES attract international-quality visitors, researchers and postgraduate students. In our second three-year term, we hope to extend the sponsor program into the Bronze Category and to identify other companies willing to support top-quality minerals research.

Many of our sponsors also support specific research initiatives, from collaborative AMIRA projects to individual PhD projects. In this special insert, we profile the full range of collaboration between CODES and our sponsors during 1998.

corporate sponsors

Gold

Aberfoyle Resources
(now Western Metals Resources)
BHP World Minerals – Discovery
Copper Mines of Tasmania
RGC Exploration

Major support provided by Mineral
Resources Tasmania

Silver

Acacia Resources
Great Central Mines
MIM Exploration
North
Pasminco Exploration
Plutonic Resources
(now Homestake Gold)
Rio Tinto Exploration
WMC

sponsorship packages

Gold Package

\$30,000 pa

- Membership and participation in our annual Science Planning Panel and Advisory Board meetings.
- Annual updates on the research program.
- 2 HECS scholarships for MEconGeol students, total value \$10,000 pa.
- 50% off short course fees for 2 people, value \$9,000
- 16-volume set of short course manuals.
- A place on the CODES web site sponsors' gallery.

Silver Package

\$10,000 pa

- Membership and participation in our annual Science Planning Panel and Advisory Board meetings.
- Annual updates on the research program.
- 1 HECS scholarship for MEconGeol students, total value \$5,000 pa.
- 25% off short course fees for 2 people, value \$4,500
- 16-volume set of short course manuals.
- A place on the CODES web site sponsors' gallery.

Bronze Package

\$5,000 pa

- Membership and participation in our annual Science Planning Panel meetings.
- Annual updates on the research program.
- 1 HECS scholarships for MEconGeol students, total value \$5,000 pa.
- 10% off short course fees for 2 people, value \$1,800
- 16-volume set of short course manuals.
- A place on the CODES web site sponsors' gallery.

Australia

AMIRA projects

Western Metals, Pasminco, RGC

AMIRA/ARC P291A: Testing tectonic models for western Tasmania: applications to mineral exploration in Tasmania
Team: Ron Berry, Paul Kitto, Stuart Bull, Garry Davidson, Keith Corbett*, David Selley*.

Western Metals, Billiton, BHP, Cominco, Inco, North, MIM, Normandy, Noranda, Pasminco, Pancontinental, RGC

AMIRA/ARC P384A: Sediment-hosted base metal deposits.

Team: Peter McGoldrick, Ross Large, Stuart Bull, David Cooke, David Leaman, Richard Keele, David Selley*, Rob Scott.
PhD students Mark Duffett*, John Dunster*, David Rawlings, Peter Winefield.

Western Metals, CMT, Rio Tinto, Denehurst, Normandy, Pasminco, Queensland Metals, RGC

AMIRA/ARC P439: Studies of VHMS-related alteration geochemical and mineralogical vectors to mineralisation: Mt Read Volcanics and Mt Windsor Volcanics.

Team: Ross Large, Bruce Gemmell, Joe Stolz*, Jocelyn McPhie, Garry Davidson, David Cooke, Rod Allen, Mike Roache*, Wally Herrmann, Mike Blake. PhD students Bill Wyman, Mark Doyle*, Robina Sharpe, Cathryn Gifkins, Holger Paulick.
Masters students Russell Fulton, Andrew Jones, Jason Beckton, Tim Callaghan.

* no longer with CODES.



SPIRT projects

Alkane, Goldfields, Newcrest, North, Homestake, Peter Groves Resources

ARC SPIRT: Origin and metallogenesis of Ordovician volcanic belts of central western NSW: a \$10 billion resource.

Team: T Crawford, D Cooke, D Glen GSNSW, R Scott, S Meffre, R Squire, W Herrmann, L Barron & J Watkins GSNSW

Western Metals, CMT, North, Normandy, Rio Tinto

ARC SPIRT: Scale-dependent electrical properties of sulfide rocks.

Team: M Roach

student projects

Acacia

APA-I: Karin Orth PhD Volcanology and mineralisation, Koongie Park, WA.

BHP

APA-I: Stephen Bodon PhD Geology, geochemistry and genesis of the Cannington Ag-Pb-Zn deposit, Mt. Isa Inlier, Qld.

APA-I, SPIRT: Owen Hatton PhD Basin configuration, volcanology/sedimentology and pre-deformational alteration of the Toole Creek volcanics, Mt Isa Inlier, Qld.

Mark Shelverton Hons Proterozoic Cu-Au mineralisation and alteration at Jimmy's Creek Prospect, Qld.

MIM

Stephen Law MEconGeol Structure of 3000 and 3300 Cu ore bodies, Mt Isa, Qld.

North

S&TS: Vanessa Lickfold PhD Intrusive history and volatile evolution in the Goonumbla porphyry Cu-Au district, NSW.

Mark Arundell MEconGeol Mineralisation in the Parkes porphyry field, NSW.

AusIMM Schol: Racquel Kolkert Hons Carbonate-base metal veins peripheral to the Goonumbla porphyry Cu-Au deposits, NSW: vectors to mineralised centres.

Pasminco

TGMS: Cathryn Gifkins PhD Volcanic facies and alteration, Mt Black, w Tas.

TGMS: Mark Edwards Hons Sedimentology and structure of the Gordon Group limestones, n Tas.

TGMS: Sophie Smith Hons Acid mine drainage in the Bakers Creek waste rock dump, w Tas.

RGC

APA-I: Kirstie Simpson PhD Volcanic facies architecture of the Mt Windsor Volcanics, Qld.

OPRS: Holger Paulick PhD Facies architecture, alteration and metamorphism of the volcanic host rock sequence at the Thalanga massive sulfide deposit, n Qld.

Timothy Callaghan MEconGeol Geology and alteration of the Mt Julia deposit, Henty Gold Mine, w Tas.

Robert Findlay Honours Structure of the South Henty prospect, western Tas.

Rio Tinto

APA: David Rawlings PhD Geology and tectonostratigraphy of the upper Tawallah Group and metallogenesis of sediment-hosted Cu deposits, southern McArthur Basin, NT.

Richard Pagen Honours The Kaiser Cu-Au prospect, Wellington, NSW.

Western Metals

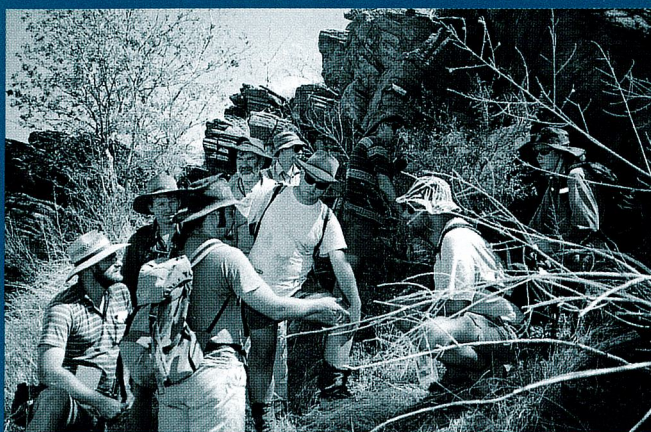
APA-I: Daryl Clark PhD Geology and genesis of primary Cu mineralisation, Gunpowder deposit, Qld.

WMC

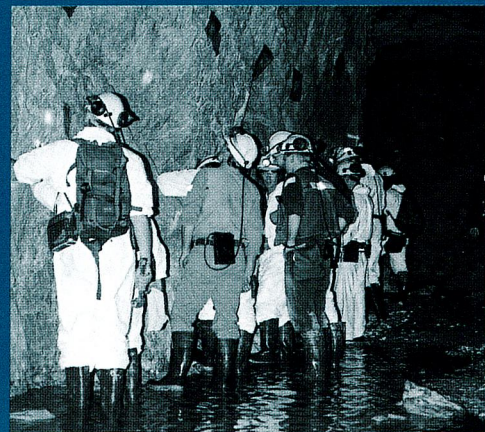
APA-I: Bruce Anderson PhD Structure, alteration and mineralisation of the Nifty Cu deposit, Paterson Orogen, WA: implications for ore genesis.

Suzanne Baldock MEconGeol Uranium mineralogy and distribution at Olympic Dam, SA.

Simon Woffenden MEconGeol The paragenesis of magnetite-hosted Cu-Au mineralisation at Cairn Hills prospect, Coober Pedy, SA.



CODES has a reputation for strong links with the mining industry. Sponsorship gives companies the opportunity to participate in setting directions for minerals exploration and ore deposit research.



AMIRA projects

Falconbridge, Homestake Gold, Minoroc, Normandy Exploration, Noranda, North, Pasminco Exploration, Phelps Dodge Australia, Placer Exploration, PT Rio Tinto Indonesia, WMC

AMIRA P390A: Tectonics and metallogenesis of South East Asia.

Team: Khin Zaw, C Burrett, R Berry, R Large, E Bruce.

student projects

Barrack Gold, BHP, Inmet, Newcrest, North

Andrew Rae

PhD

The Palinpinon geothermal field, Negros, Philippines: an active porphyry Cu system.

BHP

Sukmandaru Prihatmoko

MEconGeol

Prospectivity analysis of, Java Island, Indonesia, for porphyry and epithermal deposits.

Paul Cromie

MEconGeol

Geological setting and mineralisation characteristics of the Funing micro-disseminated gold occurrences, Yunnan Province, China.

Pasminco, UTas

Michael Skirka

Honours

Duddar Pb-Zn deposit, Pakistan

PT Rio Tinto Indonesia, PT Kelian, Equatorial Mining

Andrew Davies

PhD

Geological setting, geochemistry and genesis of carbonate-base metal enriched epithermal gold mineralisation, Kelian Gold Mine, east Kalimantan, Indonesia.

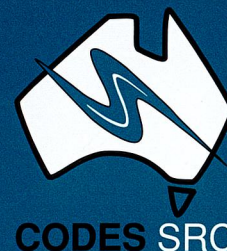
Rio Tinto

Ian Ledlie

MEconGeol

Geology of the Teresa de Colmo Fe-Cu breccia deposit, Chile.

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New sponsors for Australian Student Mineral Venture

We are thrilled to report that Normandy Mining Limited, WMC (Copper Uranium Division), MIM Exploration, Minotaur Gold and CSR (Construction Materials) have joined the ASMV corporate sponsor team for 1999. The new sponsorship has come about from a regional reorganisation so that a greater number of students around Australia can join this excellent program.

Pasminco and Western Metals have continued their support, and AusIMM Melbourne, Central

Victoria and Adelaide Branches have also provided substantial funds this year and are major sponsors for the SE Region.

This year, we introduce South Australia to the South East Region (previously part of the West Region) and farewell New South Wales, which is now part of the new Central East region. With South Australia providing a new pool of students, generating links with that state is a vital component of the program. Allister McLeod has provided much of the energy and effort in recruiting new contacts in South Australia, and we appreciate his time and effort for this very positive result.

New Leaders

From the SA Chamber of Mines and Energy, education manager Debbie Crossing has joined the

leader team to represent South Australia. She has promoted the ASMV at careers events around SA and has also generated new initiatives – including a pre-summer briefing for South Australian students, sponsors and AusIMM branches.

From Victoria, Mike Gregson will join the leader team for one week and each will chaperone students from their state to Tasmania. ASMV Coordinator Stewart Gillies will also join the crew this year as the AusIMM Observer to check out progress.

Updated Format

Both Debbie and Mike will give presentations to the group about the geology and minerals industries in their states to give an appreciation of the similarities and differences between minerals scenes in the SE Region. The excursion manual also has been extended to include information about the minerals industry in the entire SE Region.

Healthy Media

A revised media campaign has seen the ASMV more widely promoted throughout the SE Region. Several newspapers have carried stories about local students participating in the program, and the state journals of the Australian Science Teachers' Association will carry news stories in their final editions for 1998, as well as a round-up and advertising in the New Year national edition. The Department of Education in South Australia will carry a major piece in their newspaper 'Xpress' in the New Year, reaching every employee of that department in SA.

OS








1999 AUSTRALIAN STUDENT MINERAL VENTURE – South East Region

Congratulations to these students selected for the 1999 ASMV - South East Region, a summer school in Tasmania from 10 to 22 January 1999:

Adam Davey Michael Engelaar Andrew Fincher Jessica Hawkes Cynthia Holloway Adam Keith Jim Kokkios Simon McMahon Mark Olsen Jason Tilley Mettina Barrington Daniel Eberhard Lauren Hansen Russell McGifford Cliff Senkbeil Sarah Tassell Lee Taylor Zadok VanWinden Sean Austin Elizabeth Enders	Heathfield High School, SA Golden Grove High School, SA Prince Alfred College, SA Heathfield High, SA Pembroke School, SA Eudunda Area School, SA Underdale High School, SA Marryatville High School, SA Cleve Area School, SA King's Baptist Grammar School, SA Hobart College, Tas Hobart College, Tas St Patricks College, Tas Prospect High School, Tas Geeveston District High, Tas Launceston College, Tas Hobart College, Tas Newstead College, Tas Cobram Secondary College, Vic Echuca High School, Vic	Joel Rowe Campbell Watkins Shaun Westhead Dale Baum Rachael Brown Elaine Chia Kee Ming Doery Katherine Gray Thao Huynh Nicole Kee James Kenway Karl Malitz Emily McPherson Sonia Shen Kelli Dodman Thomas Hawkes Sarah Kerr Gregory Pattison Adam Ritzinger Michael Gillies	Colac High School, Vic Echuca High School, Vic Bendigo Senior Secondary College, Vic Maroondah Secondary College, Vic Balwyn High School, Vic Presbyterian Ladies College, Vic Trinity Grammar School, Vic Clonard College, Vic MacRobertson Girls' High School, Vic Methodist Ladies College, Vic Ivanhoe Grammar School, Vic Corryong Secondary College, Vic Melbourne Girls Grammar, Vic MacRobinson Girls' High School, Vic St Margarets School, Vic Euroa Secondary College, Vic Assumption College, Vic Sale College, Vic Diamond Valley College, Vic AusIMM Observer
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The ASMV is an initiative of the Australasian Institute of Mining and Metallurgy (AusIMM) and is presented in the South East Region (SA, Tas Vic) by the Centre for Ore Deposit Research and the School of Earth Sciences at the University of Tasmania in collaboration with the Tasmanian Minerals Council, Mineral Resources Tasmania and Hobart College with support from the South Australian Chamber of Mines & Energy and the Victorian Chamber of Mines. We thank the following companies and organisations for financial support, and all companies hosting the ASMV:

SUPPORTERS

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Beams Limestone Quarry
Boral Quarries
Caterpillar Elphinstone
CMT Mt Lyell Mine
Comalco
Corinna Silica Flour Mill
Cornwall Coal
Derby Tin Mine Centre
Goliath Cement
Grubb Shaft Museum
Henty Gold Mine
Hydro Electric Corporation
Pasminco - Rosebery Mine
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Queen Victoria Museum & Art Gallery
Temco
Van Diemen Paving
Western Metals - Hellyer Operations
Zeehan Mining Museum

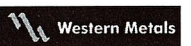


An initiative of the AusIMM Education Endowment Fund

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MIM Exploration
Minotaur Gold
Normandy Mining
Pasminco
Western Metals
WMC Copper Uranium Division








For information on the 1999 ASMV, contact Jessica Tyler, SE Region Administrator, ph. (03) 6226 1863

In Circulation

New Staff

Dr Marc Norman has been appointed as a CODES Senior Research Fellow to take responsibility for developing and operating the new Hewlett-Packard laser ablation ICP-MS system for microanalysing (spot down to ~10 microns) trace elements in geological materials.

The system was installed in late 1998 and Marc will start at CODES in early January. In 1999, he will be completing the final year of a 5-year Australian Research Council Post Doctoral Fellowship, concentrating on the petrogenesis of some eastern Australian granitic suites and their role in the construction of continental crust.

Marc obtained his PhD in 1987 from Rice University (Texas, USA) and has held Post Doctoral appointments overseas at the NASA Johnson Space Center (Houston) and the University of Hawaii and in Australia at the Research School of Earth Sciences at Australian National University, as well as Macquarie University.

Marc has been at the forefront of developing analytical techniques for geochemistry, including laser ablation ICP-MS analysis of silicates with the research group at Macquarie University. His interests have focussed primarily on the geochemical evolution of the Earth's crust-mantle system, and he has published extensively on the geochemistry of terrestrial and lunar rocks and meteorites as well as the geochemical evolution of the Moon.

Visitors

Dr John Walshe from CSIRO's Division of Exploration & Mining visited during September to discuss collaboration.

Dr Rob Harris from the University of Miami joined us for a few months to work with visiting Fellow Professor Grant Garven on hydrothermal modelling.

Dr Mark Jessell from Monash University visited to give a seminar on the 'Noddy' software package titled '3-D geological modelling of potential field data'.

Jill Middleton (honours student, Monash University) visited during October to work with CODES researcher Leonid Danyushevsky on infra-red and microprobe analysis.

Dr Graham Carr from the CSIRO Division of Exploration & Mining visited in November to discuss collaborative research. He also gave a seminar presentation on a north Australian Proterozoic Pb-isotope AMIRA project.

Dr Dave Matthey from the University of London plans to visit in December to assist in establishing a laser fluorination oxygen isotope facility in the University of Tasmania's Central Science Laboratory.

A delegation from the **Technical University of Clausthal Institute for Mining** (Germany) plans to visit in the New Year as part of its bi-annual overseas mining excursion for students. The visit to CODES is part of a wider tour of Australia.

Graduations

Sukmandaru Prihatmoko (MEconGeol): 'Prospectivity analysis of Java Island, Indonesia for porphyry and epithermal deposits'.

Tim Callaghan (MEconGeol): 'Geology and alteration of the Mt Julia Deposit, Henty Gold Mine, Tasmania'.

Student Intake

PhD

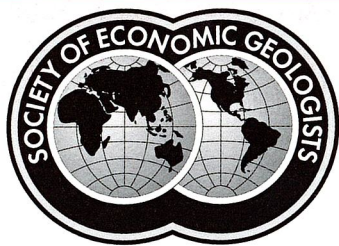
Giovanni Parente (MSc University of Naples): 'Volatile element evolution in shoshonitic suites from the SW Pacific: a melt inclusion approach'.

Dene Carroll (MSc Victoria University of Wellington): 'Tectono-magmatic evolution of eastern Viti Levu, Fiji'.

MEconGeol

Ian Laurent, Viking Gold: 'Geophysical interpretation of the Svartliden gold deposit, Sweden'.

John Taylor, consultant geologist: 'Prospectivity analysis and mineral endowment assessment of the Reefton Goldfield, New Zealand'.



Society of Economic Geologists
University of Tasmania
Student Chapter
 sponsored by CODES SRC

AGM

The University of Tasmania SEG Student Chapter held its 1998 AGM on the 4th of November. The aims of the meeting were to discuss the the past performance and future directions of the Chapter, and to elect a new Committee. Outgoing executive representatives were Peter Winefield (President), Bill Wyman (Vice-president), David Rawlings (Secretary) and Tony Webster (Treasurer). The newly-elected Executive and Committee are:

President: Oliver Holm
Vice-president: David Rawlings
Secretary: Owen Hatton
Treasurer: Darryl Clark
Committee: Rick Squire, Tony Webster, Dene Carroll, Peter Winefield.

Special Publication: 'Basins, fluids and Zn-Pb ores'

The new CODES-SEG Student Chapter joint-venture publication, 'Basins, Fluids and Zn-Pb Ores' (CODES Special Publication No 2) is currently being printed. It contains a series of extended abstracts and short papers which were presented at a symposium held at the University of Tasmania in June. It also contains documentation of discussion sessions which arose from each presentation. See the advertisement on page 6 for purchase details.

Resource centre

The new SEG library/resource centre now contains an almost complete set of 'Economic Geology' journals and a number of other donated books and journals. It is designed as a quiet reference and reading room for staff, students and visitors. It is fitted with a desktop photocopier and will inevitably house a computer and fridge. The Chapter would appreciate any unwanted or excess journals and books. Contact Tony Webster on (03) 6226 7155.

Prospectors supplies outlet

The Chapter hopes to 'fit out' geology students with hammers, hand lenses and mineral ID kits by taking on the role of a prospector's supplies 'shopfront'.

Future activities

- A wine bottling of Cabernet Sauvignon and Shiraz is planned for Christmas.
- We are hoping to promote discussions on first aid, safety and survival courses for students and staff. Until now, this kind of training has been the responsibility of individuals, so attendance at courses has been ad-hoc. Field safety awareness is essential for field geologists and relevant courses should be carried out before heading out into the wilderness!
- We aim to run field trips that will expose our members to

successful mine management, in addition to the basic deposit geology.

- A field trip to the Arthur Mobile Zone in northwestern Tasmania is being considered.
- A 'New Year' staff-students cricket game is planned for Feb-March next year.

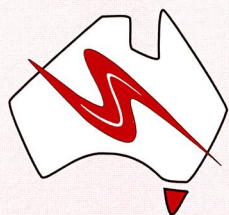
David Rawlings

A last word from the Pres...

As the outgoing President of the Student Chapter, I would like to thank Dave Rawlings, Tony Webster, Mark Duffett, Steve Hunns, Christine Higgins, Marilyn Feast, Jessica Tyler and everyone else in CODES and the School of Earth Sciences for their help and support in getting the Chapter off the ground and active over the last year.

In particular, I would like to express my gratitude to Dave Rawlings who has shouldered much of the Executive Committee workload over the last few months and continues to be a major driving force behind Chapter activities. Unfortunately due to study and family commitments, I am unable to continue as President but am happy in the knowledge that the new Committee (Oliver Holm, Owen Hatton, Dave Rawlings and Daryl Clark) will further develop the Chapter upon the foundation that has been laid.

Peter Winefield

**CODES SRC**

Centre for Ore Deposit Research

Contributions

Contributions welcome but not guaranteed to run. Send to:

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UNIVERSITY OF TASMANIA

Short course dates for 1999

exploration geochemistry and hydrothermal geochemistry

8 – 19 March 1999. Leaders: CRCLEME and David Cooke

Covers recent developments in exploration geochemistry, with particular emphasis on the importance of the regolith and landscape evolution, as well as an introduction to the chemistry of hydrothermal systems. Includes a review of the importance of metal solubilities and ore fluid chemistry in controlling types and locations of ore deposits.

exploration geophysics, remote sensing and image processing

28 June – 9 July 1999. Leader: Mike Roach

Focuses on the theory and application of potential field and electrical geophysical techniques in exploration geology. The uses, problems and pitfalls of each method will be covered. Both prospect evaluation and regional geophysical studies will be discussed, as well as structural interpretation of airborne geophysical data, remote sensing, data integration and the application of GIS systems to exploration geology.

economic, management and environmental aspects of exploration and mining

1 – 12 November 1999. Leaders: Bruce Gemmell, Ross Large

Includes a one-day session on economic modelling at the feasibility stage, and a session on financing and floating companies. Exploration philosophy, exploration management styles and the factors contributing to exploration success will be debated with a panel of exploration managers. Geological and hydrologic aspects of acid mine drainage will also be considered in a three-day session including a field trip to western Tasmania.

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