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The AusIMM NZ Branch Newsletter

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AusIMM 2003 Conference

**“Opportunities for the New Zealand
Mining and Minerals Industry”**

3rd-5th September 2003

Kings Hotel, Greymouth, New Zealand



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Editor's Note

Hope you have all diarised the 2003 Conference in September. The Conference will soon be upon us. Watch your emails and the next edition of the newsletter for updates.

In the vein of promoting AusIMM Members to the greater membership, if you know of any Members joining or transferring, or students signing up, please notify the newsletter editor.

If any member knows of any interesting speakers, have any ideas for local branch activities or information they would like to share contact your local branch representative to organise a presentation or local event.

Please notify the editor, if you have not already done so, should you wish to receive your newsletter electronically by sending an email to graeme.fulton@xtra.co.nz

I look forward to your articles and information.

Next Newsletter: August/September - 2003
Deadline for articles/letters – 1st August

NZ Branch Chairman's Report

Roger Gregg

The annual AusIMM Congress provides the opportunity for members, through their branch representatives, to influence the strategic direction of the Institute and provide feedback on any matters of importance to the grass root membership. In addition the Congress elects the president of the Institute for the coming year.

A representative of the New Zealand Branch, usually the Branch Chairman, has attended each Congress and I propose to represent your views at the coming meeting 13-15 June in Perth. Vivienne Bull who is a Board Member will also be attending. Please forward any views you wish in particular to be pursued. Potential viewpoints for the role for branches that will receive particular attention at Congress include:

- Promoting the minerals industry as an attractive career option.
- Supporting students and young graduates through their careers.



- Membership attraction and retention.
- Influencing the environment through advocacy and,
- Recognising, highlighting and rewarding best practise.

Your feedback and comments will be welcome at roger.gregg@med.govt.nz

Congress' key task is to review the progress in implementing the strategic plan for the current year, making recommendations to the Board of the Institute for change if thought appropriate or necessary. This in turn leads to approving the plan for the coming year.

The AusIMM currently has five strategic goals and tactical objectives. They concern:

- Self regulation through ethical practices and promoting professional excellence
- Advocacy, representation and promotion of careers in the minerals industry
- Membership, branches and societies (sharing knowledge, mentoring and networking)
- Continuing professional development (products, services, education and employment)
- Accountable and transparent organisation to meet members' needs.

Each of these goals strikes to the essence of our work in the minerals and mining industry and our relationships within the AusIMM.

It is critical that we have "best practise" codes and that we promote these both within our Institute and to all (global) stakeholders. However it is the remaining points, which are of increasing interest to our membership.

The AusIMM is increasingly being looked to provide an advocacy role for our industry, particularly promoting it as an attractive career choice and then supporting young professionals who have joined us on this path. Congress will be considering how to best provide this support, through advocacy affiliations and supporting other industry lobby groups.

It is through the goal/objective of sharing knowledge, mentoring and networking that the AusIMM most directly touches its membership. This is done through supporting the Institute Branches in providing meeting and learning opportunities. In this respect our Branch's Local Organisers and Annual Conference Organising Committee are pivotal in carrying out this knowledge sharing / networking task.



You can directly help our Local Organisers by supporting meetings and suggesting speakers.

Mark Pizey and his Organising Committee have called for papers (closing 25 April) for the 2003 Conference to be held in Greymouth 3-5th September. Officially I look forward to hearing the papers that will be on offer and networking with members. Personally and frankly I really look forward to receiving the greatly enjoyable but health threatening traditional West Coast hospitality.

NZ Branch Councillor's Report

Vivienne Bull

I have just returned from the May Board meeting in Brisbane, which coincided with the Young Leaders Conference, the Student Chapters meeting and the mining games. I recommend attendance at the Young Leaders conference, particularly to our younger members. The Board covered the following:

- The submissions by The Institute to the Minerals Tertiary Education Council, the Exploration Action Agenda and the Ethics Review recommendations were noted. See the AusIMM website.
- Work continues on various International Initiatives (possible reciprocal recognition of membership and outcomes of CMMI Cairns Protocol), establishing the Corporate Support Task Force, the Minerals Tertiary Education Task Force, the National Register of Mining Industry Professionals together with a possible watching brief on a case before the NSW Industrial Relations Commission with respect to mine managers being potentially liable personally for breaches of the NSW Occupational Health and Safety Act.
- Ethics Review. The Board was impressed with the report and recommendations by the Task Force, however prior to endorsement, the report has been placed on The AusIMM website and there will be an article in the May/June Bulletin for members feedback by end of June 2003. See <http://www.ausimm.com/whatsnew/whatsnew.asp>
- A new server was installed in Central Services with an upgraded membership VTASS system is to be installed with a new switchboard.



- Discussion took place on Engagement of members in The Institute and this will be a thrust for Congress in Perth from 13th to 15th June 2003 and how to attract young ones to the industry as a career option.
- 92% of members who have responded to the International Transactions Survey support the initiative. Surveys closed 30th April, less than 500 of the 5,300 sent out were returned. The survey stated that if only access to electronic copies was acceptable then non-return of the survey indicated a preference for this option (electronic only). Of those returned 63% preferred electronic and 37% hard copy. Negotiations continue with IOMMM. The Board has concerns about intellectual property, timing and cost of hard copies printed in UK.
- Other reports included, Review of Central Services – Leadership & Cultural Change process, the VALMIN Draft Restructure, The JORC Exposure Draft, the ASMV Review and AusIMM Publication Task Force, The AusIMM and MICA Inc MOU, The AusIMM Bulletin contracts to Resolutions in Perth from June/July 2003 Edition, Professions Australia and Public Policy Issues.
- Five Branches have advised topics to present and discuss at Congress 2003 in Perth. NZ will be represented by Roger Gregg and myself. If you have any issues to raise contact us. The final programme is now being drawn up.
- For the 6 months to March 2002/3 Financial year the Institute is slightly ahead of budget with 85% of subscriptions received (89% at this time last year).
- The Auditors provided an unqualified audit for 2001-2, which will be presented, to the AGM and Congress in Perth and to the members. The surplus from Central Services to replenish the reserves was \$378,188 and from branches \$585,315. This was due to membership subscriptions being up, two large conferences, savings and improved effectiveness within Central Services.
- The Board agreed to change the Financial Year to coincide with membership subscription year. It is envisaged that there will be no impact on members.

More details of these and other topics discussed by the Board are on www.ausimm.com.au or contact me direct on vhbull@ihug.co.nz



NZ Branch Calendar of Events - 2003

- School Science Fairs - dispatch of prizes (May)
- AusIMM awards (applications close 30 June)
- AusIMM Congress (Perth, June, date to be announced)
- Call for nominations for NZ Branch Committee prior to 1 July
- P & H MinePro Services (Australasia) Travelling Scholarships (applications close 31 July)
- Education Endowment Trust Fund (applications close 19th August)
- Notice of AGM (at least 14 days prior to AGM, i.e. mid August)
 - Includes: Minutes of previous AGM
 - Chairman's annual report
 - Audited statement of accounts
 - List of nominations for NZ Branch Committee
- Notice of motion to amend rules (at least 10 days prior to AGM, i.e. mid August)
- AusIMM Annual Conference, Greymouth (3-5th Sept 2003)
- AGM (at AusIMM Annual conference)
- Outokumpu Travel Grant for Metallurgists (applications close 30 September)
- Audit of Branch finances (October)
- Audit of Education Endowment Trust Fund finances (October)
- Atlas Copco Scholarship (applications close 31 December)

News of Members

Introducing: Darryn Quayle

Darryn joined Orica Explosives in 2000 as the Area Business Manager for a large region in Western Australia. He transferred to New Zealand in to his current role as the Mining and Exports Manager in January 2002.

Darryn's background is as a mining engineer where he trained at the Western Australian School of Mines in Kalgoorlie. He spent significant time in various underground and open pit operations and holds a First Class Certificate of competency enabling him to manage both underground and open pit mines. His work experience to-date has also included time as a



senior consultant working on projects from Myanmar (formerly Burma), to Australia and New Zealand.

Darryn is a Chartered Professional with the AusIMM, a member of ASIA and holds postgraduate qualifications in Business.

Contact details for Darryn:

Position: Mining and Exports Manager
Phone: +64 9 292 1004
E-mail: darryn.quayle@orica.com

Education Endowment Fund

Recipients of Education Endowment fund awards will have a synopsis of their work published in the Student Section of the newsletter.

The closing date for applications for the coming years Education Endowment Trust Fund awards is 19th August.

Students & Young Professionals – NZ Chapter

Wendy Hampton

A reminder for those interested in going to the Youth Congress in Brisbane at the end of April, see previous newsletter for details or check the web page at www.ausimm.com under meetings.

Plans are underway for a lunch for students at the September 2003 NZ Branch AusIMM Conference in Greymouth.

I welcome any comments or suggestions you may have. Please email me at wendy12@clear.net.nz.

AusIMM NZ Branch - Conferences



AusIMM 2003: “Opportunities for the New Zealand Mining and Minerals Industry”

3-5 September 2003

Kings Hotel, Greymouth, New Zealand

First Announcement and Call for Papers

A conference that will examine the geology, mining, metallurgical, economic, and environmental aspects of mineral deposits in New Zealand. While attending the conference, take the opportunity to visit some of New Zealand’s mineral deposits and enjoy the unique scenery and adventure tourism that is the West Coast of New Zealand.

Technical sessions and posters will focus on the opportunities available to the minerals and mining industry in New Zealand over the next decade.

1. Geosciences
2. Mining
3. Metallurgy
4. Environment
5. General – legal, economic, case histories.

Additionally, there will be:

Trade exhibits

Field trips to underground and surface coal mining operations, alluvial gold mining operations and a specific structural and tectonic geology field trip.

Abstracts (no more than 300 words) due by April 25th, 2003. Abstracts and papers will be published in a proceedings volume available at the conference.

To express interest and for more information contact Nicola.Neame@solidenergy.co.nz;

Fax: (03) 762 7108 Tel: (03) 762 7103 Watch <http://www.ausimm.co.nz> for programme developments.

Student Section

This section provides an area for the publication of student research paper summaries or lists. Should you wish to submit a synopsis of your research work, please send to the newsletter editor.

Physical properties analysis and petrography of ironsand at the Taharoa Ironsand Deposit, New Zealand

By Kirsty T Macorison

Master of Science in Geology

Geology Department, University of Auckland

Supervisors: Dr J. L. Mauk and Assoc. Prof. I. E. M. Smith

This research investigates the mineralogy of both the magnetic and non-magnetic minerals of ironsand at Taharoa. Detailed petrology was undertaken to try and gain a better understanding of source areas for the detrital material that comprises the ironsand. Previous research of ironsand suggests all material has been derived from the eroded volcanic cones of Taranaki and the Taupo Volcanic Zone.

Ironsand deposits occur along the west coast of the North Island of New Zealand from Wanganui in the south to the Kaipara Harbour in the north. The distribution of ironsand suggests there could be other possible origins for this material. Extensive sampling was undertaken at the Taharoa mine site with an additional five samples being collected from beaches within the Taranaki region. Petrographic and geochemical analyses were carried out on all samples.

All samples collected from the Taharoa mine site have been analysed for their physical properties: density (dry, wet and particle), porosity, magnetic minerals content, non-magnetic minerals content and clay minerals content. This analysis has helped to constrain the variability of the Taharoa ironsand deposit both in lateral extent and up to a depth of approximately six metres. The results indicate the deposit to be remarkably homogeneous in vertical and lateral extent. Outlying samples do exist but these are few and are generally consistent across all physical properties. The clay minerals content is minimal at this deposit, therefore giving a relatively consistent high percentage of magnetic minerals through the deposit. Two areas of the mine (the tailings and stockpile areas) have been extensively sampled

throughout this research project as results yielded unexpected results in regards to the amount of magnetic minerals present.

Petrographic analysis shows there to be an abundance of hematite exsolution lamellae coexistent with homogeneous magnetite and ilmenite. The appearance of exsolution lamellae suggests a slower cooling time and therefore could suggest sources other than volcanic. Plutonic bodies cool at a slower rate and also display these magnetite exsolution textures however; likely source areas need to be considered. Karamea and Separation Point Batholiths exist in the north of the South Island and it is likely that these areas could have contributed to this detrital material. The distance transported, abundance and relatively pristine nature of this magnetite all need to be factored into potential source areas.

Electron microprobe analysis suggests that the majority of this detrital material has an andesitic source. Plots of typical New Zealand andesitic and rhyolitic geochemical oxide data show all sampled areas to strongly correlate with an andesitic origin. Although a rhyolitic origin is plausible limited samples appear to geochemically correlate suggesting that this is probably not a main contributing source area. Limited correlation exists between New Zealand plutonic bodies and geochemical data attained for the sampled areas. From both plutonic and volcanic data sets all outliers exist. It is difficult to know if this is truly reflectant of a new source area, as the detrital nature of this material also needs to be considered. Samples of a plutonic origin have a very low TiO_2 content, which is also shown in some sample data, however this could be due to the presence of lamellae within the host magnetite grains.

Final petrographic analysis is currently underway and is being correlated with results received from geochemical analyses. All questions pertaining to the origin of the detrital magnetite present on North Island west coast beaches cannot be answered but some possible scenarios have been introduced. Further research will need to be undertaken on plutonic rocks in conjunction with ironsand samples to be able to conclude on the many questions that will arise from this work.

Final conclusions in this research project are currently in progress. However:

- From physical properties analysis it can be concluded that the Taharoa ironsand deposit is homogeneous both in vertical and lateral extent.



- Petrography shows that the mineralogy is uniform throughout the deposit with mineral abundances only varying across different areas.
- Definite mineralogical similarities can be seen between the Taharoa ironsand deposit and the Taranaki beach samples.

Member Promotion

This section is for members who wish to promote their services and skills. It is envisaged that this will be in the form of business cards. Additionally, students may wish to place permanent or vacation employment requests. Please note this section is intended for members and not companies/organisations. Please forward your business card or advert to the editor.

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Notices

WANTED

Copy of AusIMM Monograph 13 Mineral Deposits of NZ. Please contact Alan Sherwood a.sherwood@clear.net.nz

Williams Volume, Economic Geology of New Zealand

We are trying to locate diagrams used to produce the Williams volume, Economic Geology of New Zealand. This was first produced in 1965 as: Williams G.J. 1965: Economic Geology of New Zealand. Eighth Commonwealth Mining and Metallurgical Congress, volume 4.

It was revised and published as a second edition in 1974: Williams, G.J. 1974: Economic geology of New Zealand. Australasian Institute of Mining and Metallurgy monograph series, number 4.

If anybody has or knows the whereabouts of the original diagrams/figures can they let the NZ Branch secretary, chairman or one of the committee know? Secretary and committee details are listed at the beginning of the newsletter.

We want to get this volume reproduced in hardcopy and CD and the originals are needed for good quality scanning.



Conferences, Functions & Courses

AusIMM Events and Conferences for 2003

- **July 14 - 18** [ICARD 2003 - International Conference on Acid Rock Drainage](#)
Cairns, Qld
Contact: **AusIMM Events Department**
Telephone: (03) 9662 3166
Facsimile: (03) 9662 3662

 - **July 21 - 23** [Mill Operators' Conference 2003](#)
Contact: **The AusIMM Events Department**
Telephone: (03) 9662 3166
Facsimile: (03) 9662 3662

 - **September 9 - 12** [AusIMM 2003 - Managing Risk in Mining Projects](#)
Sydney, NSW
Contact: **Chris Sabin**
Telephone: (02) 9416 0448
Facsimile: (02) 9416 0617

 - **October 13 - 15** [Water In Mining 2003](#)
Brisbane, QLD
Contact: **AusIMM Events Department**
Telephone: (03) 9662 3166
Facsimile: (03) 9662 3662

 - **November 3 - 6** [Large Open Pit Mining Conference 2003](#)
Contact: **The AusIMM Events Department**
Telephone: (03) 9662 3166
Facsimile: (03) 9662 3662

 - **November 17 - 19** [Mine Geology 2003](#)
Contact: **AusIMM Events Department**
Telephone: (03) 9662 3166
Facsimile: (03) 9662 3662
-

Branch News

Listed below is news from the local branches covering future activities and feedback on events. Should you wish to organise an event, social function or field trip, please contact your local area organiser – contact details are listed at the beginning of the newsletter.

Auckland

Wendy Hampton

The Auckland section has had one evening session in March. Wendy Hampton gave a presentation of her thesis results to a small group. The next meeting is on the 9th April with a talk by Jeff Mauk on the GODS



(Giant Ore Deposits) of Spain. Further meetings will be held on the second Wednesday of the month – 11 June, 9 July and 13 August so far.

As Wendy has now moved to Australia to live, the Auckland area is looking for someone to take over this role, please. If you are interested please contact one of the committee members.

Wellington

Tony Christie

No news from the Wellington section

Special Features

- The special features section will include any information or articles of a special or once of nature.

CONGRESS 2003 - "ENGAGEMENT" PERTH 2003

Congress provides the opportunity for Members and representatives of the Branches and Societies to influence the strategic directions of The Institute and to provide feedback on all sorts of matters, not only strategic. In addition, the Congress is empowered by the Bye Laws to elect the President. The theme for Congress 2003, to be held in Perth from Friday 13 June until Sunday 15 June, is "Engagement".

Why "Engagement"?

Following three successful Congresses in Melbourne, Canberra and Darwin, our objective in 2003 is to build on the outputs from these Congresses. With each succeeding Congress, we have been seeking to have more active participation in the proceedings, with more discussion and fewer presentations. As well, we have been attempting to have more acceptance of the responsibility for the outcomes that arise from the meeting. There is a perception that the CEO takes all outputs and incorporates them into The Institutes strategies and business plans, then carries out the actions, but to a large extent it is business as usual for the other constituent parts of The Institute.

Thus, the challenge is for the representatives, and more particularly the Branches and the groups that the participants represent, to seize the



opportunity to take responsibility to ensure that the Branches and groups own and further develop the outcomes. This can be done by:

- Mutual agreement on issues to be discussed;
- Homework in the lead up to the Congress;
- Greater participation and involvement in Congress;
- Signing off on outcomes with a commitment to follow-up and report back;

The word “engagement” can be interpreted in many ways, but more specifically to mean involvement and commitment by the participants representing Branches, the Directors, Central Services, Societies, Students & Young Professionals, Committees and Task Forces.

It was recommended by the Board, that the following list of topics be circulated to the major and more active Branches, that they be asked to choose a topic for presentation and then be prepared to lead the discussions. It was requested that each of those Branches endeavour to include the smaller regional Branches in their area. It was also suggested that each Branch nominate a person to champion Congress 2003. They were asked to consider the role of Branches in the following:
Seeking and obtaining Company support

- Attracting and promoting the Minerals Industry as an attractive career option
- Supporting students and young graduates through their careers
- Running conferences or championing technical publications
- Membership attraction and retention (and is there a better capitation model?)
- Promoting professionalism through CPD and recognition (CP and Fellow).
- Recognising, highlighting and rewarding best practice
- Influencing the environment through advocacy

The programme is being prepared to cater for five topics only, so that there is adequate time to deal with them in sufficient depth.

It would be appreciated if you could nominate a person from your Branch to champion Congress 2003 and to choose a topic and to garner support from the smaller Branches in your region.