

# Technical Program

The following papers will be presented throughout the program for Iron Ore 2002

## Keynote Speakers

- **Graeme Hunt** – President, BHP Billiton Iron Ore, Australia
- **David Smith** – Managing Director, Hamersley Iron Pty Limited, Australia
- **Prof Nic Beukes** – Department of Geology, Rand Afrikaans University, South Africa
- **Dick Morris** – Consultant, CSIRO Exploration and Mining, Australia

## Papers

- Ore Mineralogy and its Relevance for the Selection of Concentration Methods in the Processing of Brazilian Iron Ores – **R R R Silva, S C Amarante, C C Souza and A C Araujo**
  - Strategic Planning for Iron Ore Mines According to Customer Needs – **K Souza e Silva and F F S Araujo**
  - The Importance of Carbonate Alteration in the Formation of the Carajas High-Grade Hematite Deposits – **S C Guedes, CA Rosiere and M Barley**
  - The Determination of Fe, Si and Al Content in Iron Ore Blast Holes by Nuclear Logging – **M Bosaru, A Rojc, J Ronaszeki and C Smith**
  - Smart Solution to a Sticky Problem: In-Mine Clay Mapping Using High-Resolution Geophysics – **G Burnham and P Hawke**
  - Of Detritals, Derivatives and Determination - An Example of Detrital Iron Discovery – **A L Butt, P J Hawke and M F Flis**
  - The Systematic Assessment of Hydrocyclone Performance to Select an Optimum Configuration for a Given Application – **J J Campbell, Z Rui, J M Young, P T Nielsen and J F M Clout**
  - A Geological Comparison of the Sishen and Welgevonden Iron Ore Deposits – **M D Carney and P J Mienie**
  - Upgrading Processes in BIF-Hosted Iron Ore Deposits: Implications for Ore Genesis and Downstream Mineral Processing – **J Clout**
  - Boodarie Iron - Ore Preparation Plant: An Overview – **C Bensley, D Evans and A Curtiss**
  - BIF-Hosted High-Grade Hematite Deposits, A Coherent Group? – **H Dalstra, T Harding, T Riggs and D Taylor**
  - Recovery of Iron Values From Tailings Dumps Adopting Hydrocyclone and Magnetic Separation Techniques – **B Das, P S R Reddy and V N Misra**
  - Contract Versus Owner Mining - An Update on Australasian Open Pit Mining Practice – **J S Dunlop**
  - High-Grade Optimisation and Improved Grade Control Practise in Mt Tom Price – **R Bitencourt, J Gordon, B Morey and P Mackenzie**
  - Evolution of Iron Ore Characterisation Techniques - A North American Perspective – **R G Graber and C R Sundberg**
  - Planning, Mining and Controlling Complex Iron Ore Flows From Multiple Sources: Replacing the Conventional Batch System in Favour of Continuous Stockpile Management and Ship Loading – **M Kamperman, L Beardwood and J E Everett**
  - The Measurement of Particulate Emission During the Sintering of Iron Ore – **J S Khosa, J R Manuel and A G Trudu**
  - From Mt Goldsworthy to Mining Area C - Reflections on Forty Years of Iron Ore Exploration in the Pilbara – **M Kneeshaw, D A Kepert, I J Tehnas and MA Pudovskis**
  - How Different Iron Ore Types Behave in Desliming and Flotation Processes – **N P Lima, G MA Silva and A E C Peres**
  - Integration of the Beneficiation Process Into Iron Ore Resource Utilisation – **D J Miller**
  - The Influence of the Quality of Ferrosilicon on the Rheology of Dense Medium and the Ability to Reach Higher Densities – **HA Myburgh**
  - Decision Making in Mining Project: Assessment of Risks and Uncertainties – **RA Noronha and A H Gripp**
  - Deriving Dust Quantity on Mangroves From Airborne Hyperspectral Data – **C C H Ong, T J Cudahy, M S Caccetta, P T Hick and M S Piggott**
  - Relevance of the Archaean Atmosphere to the Genesis of Giant Iron Ore Deposits – **J D M Law, G N Phillips and R E Myers**
  - Optimising Product Quality and Productivity in Robe River's Iron Ore Operations – **P Murray**
  - Distribution of Hard Hematite Ore at the Quadrilátero Ferrífero, Minas Gerais, Brazil and its Genetic Significance – **F R M Pires**
  - Origin of the Hematite Deposits at the Alegria Mine, Eastern Part of Quadrilátero Ferrífero, Minas Gerais, Brazil – **C U V Verissimo and F R M Pires**
  - Experimental Determination of Phase Relations in the Systems  $Fe_2O_3$ -CaO-SiO<sub>2</sub> (FSC) and  $Fe_2O_3$ -Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub> (FACS) - Applications to Iron Ore Sintering – **M Pownceby and J Clout**
  - Mine Spectral Imaging of Iron Ore – **E Ramanaidou, P Connor, A Cornelius and S Fraser**
  - New Insights Into the Tertiary Yandi Channel Iron Deposit, Hamersley Province, WA – **M S Stone, A D George, M E Barley and M M Kneeshaw**
  - Intelligent Selection of Engineered Wear Linings in Iron Ore Plant – **K Tuckey**
  - Mine-to-Mill in Iron Ore – **W Valery and S Morrell**
  - Mining Reactive Shale at BHP Billiton's Mt Whaleback Mine – Challenges and Solutions – **P Waters**
  - Characterisation of the Contribution of Iron Ore Dust to the Environment at Port Hedland, Western Australia – **M A Wells, E R Ramanaidou and M S Piggott**
  - Chemical Analysis Issues in the Iron Ore Industry – **B W Ziegelaar**
  - Numerical Modelling of Deformation and Fluid Flow in the Hamersley Province, WA With Implications For Genesis of Large Microplaty Hematite Ores – **J G McLellan and N H S Oliver**
- ## Poster Papers – On display at Iron Ore 2002
- Latest Developments in Cyclone Technology – **J Bosman**
  - Veining and Fluid Flow in the Area Surrounding the Mt Whaleback Microplaty Hematite Ore Deposit: Constraints on Fluid Dynamics Before, During and After Ore Genesis – **M C Brown, N H S Oliver and G R Dickens**
  - Practical Implementation of Quantitative Criteria Used to Assist Resource Classification: A Case Study From the Joffre Hosted Iron Ore of BHP Billiton's Mt Whaleback Operations – **C De Vitry**
  - Economic Modelling of Paved and Sealed Haul Roads in Open Cut Mines – **RA W Haynes**
  - Use of Iron Oxide Bearing Wastes in Sinter Making – **A K Jouhari, P S Datta and V N Misra**
  - A New Look at Old Rocks: The Origin of *In Situ* Iron Ore Deposits Derived from Banded Iron-Formation – **D Lascelles**
  - Mapping Asbestos Distribution Using Airborne Hyperspectral Data – **C Ong, E Ramanaidou and M Hussey**
  - Supergene Iron Ore and Disorder – **D T Ribeiro, F R M Pires and R M Carvalho**
  - Use of High Resolution Geophysical Technologies to Map the Base of Ore at BHP Billiton's Yandi Channel Iron Deposit – **G Turner and G Hall**
  - Bulk Density as a Method to Evaluate Reducibility of Hard Hematite Ore in DRI Process – **CA C Varajao, RA Vilela, R J de Melo, A Bruand, E R Ramanaidou, R J Gilkes, L E Lagoeiro**
  - Multistage Evolution of High Grade Hematite Orebodies from the Hamersley Province, Western Australia – **A D Webb, N H S Oliver and G R Dickens**