



Peter J. Bethell

Current Position

Senior Principal - Mineral Processing

Profession

Processing Engineer

Years' Experience

38+

Education

Ph.D. – Froth Flotation and De-watering of Mineral Fines, Nottingham University, Nottingham, England (1978)

BS – First Class Honours in Mining Engineering, Nottingham University, Nottingham, England (1975)

Graduate of the Executive Program – Darden Business School, University of Virginia, Charlottesville, VA (1991)

Licenses and Certifications

Chartered Engineer (U.K.)

Summary of Experience

Dr. Peter Bethell has more than 38 years of experience in senior management and technical functions in the fields of coal, gas, timber, industrial minerals, internationally. He has a proven ability to increase profitability through maximizing processing plant circuit efficiency and coal market optimization. Some career highlights include:

- > Developing processing plant upgrades and best practices which generated and sustained +\$50 million in cash flow increase yearly at Arch Coal.
- > Adding +\$35 million p.a. to Massey Energy's bottom line through making process improvements, optimization of allocation of production to sales contracts, and adaptation of measuring and monitoring programs. Similar results at Cyprus Amax and Pittston Coal.
- > Leader in the field of froth flotation and fine coal gravity separation.
- > Helped to introduce spiral circuits and column flotation to the U.S. coal processing industry.
- > Optimized fine coal circuit designs.
- > Instrumental in the design, construction and successful operation of 60+ new and upgraded plants including the 2006 state of the art Cardinal and the 2012 Leer plants for Arch Coal.

Awards/Achievements

- > Elected to the National Academy of Engineering (USA) for "*Contributions to advanced separation technologies for coal processing*"
- > Co-Editor /organizer of "*Challenges in In Fine Coal Processing, Dewatering and Disposal*" 2012 Conference and Proceedings
- > Winner of the 2011 Frank Aplan Award of A.I.M.E. for Contributions to Coal Preparation
- > Co-Chairman National Organizing Committee for the International Coal Preparation Congress, Lexington, Kentucky, 2010
- > Co-Editor/Organizer of "*Designing the Coal Preparation Plant of the Future,*" 2007
- > Awarded Percy Nicholls Award for 2007 by SME, for Notable Scientific Achievement in the Field of Solid Fuels
- > National Coal Board Scholarship to attend Nottingham University
- > Bircumshaw Prize Nottingham University 1975
- > Science Research Council Scholarship for PhD Research 1975-1978
- > Minerals Engineering Society Travelling Scholarship 1976

Associations

- > National Academy of Engineering(USA)
- > Member, Society of Mining & Metallurgical Engineers (USA)
- > Fellow, Institution of Mining Materials& Metallurgy (UK)
- > Fellow, Minerals Engineering Society (UK)
- > Member, Coal Preparation Society of America
- > Member Coal Preparation Society of South Africa



Professional History

2017 – Present

Senior Principal - Mineral Processing

Marshall Miller & Associates, Inc.

2011 – 2016

Principal Mineral Processing Consultant

Cardno, Inc.

2009 - 2013

Vice President, International Processing

Taggard Global

2004 - 2013

Directory Coal Preparation Arch Coal / Senior Processing Consultant

Arch Coal, Inc.

2003 - 2004

Principal

Bethell Processing Solutions

1998 – 2003

Director of Coal Preparation

Massey Energy Company

1995 – 1998

Director of Western Operations, Lithgow, Australia

Managing Director, Springvale Joint Venture, Lithgow, Australia

Vice President, Allied Operations (including plant design and optimization)

Cyprus Amax Coal

1986 – 1985

Vice President, Allied Operations

Pittston Coal Management Company

Publications

- > Presentations and publications number 50+ from 1978 through 2012, including Keynote presentations at International Conferences and Journal publications. Also Contributed chapters in "Encyclopaedia of Energy", and "The Coal Handbook".