



# Peter J. Bethell, Ph.D.

## **Current Position**

Sr. Principal - Mineral Processing

## **Profession**

Mining / Processing Engineer

## **Years' Experience**

40+

## **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 40 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) in 2014 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
- > Captain Nottingham University Tennis Club 1976-1977

## **Associations**

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