

# Table of Contents

- iii Australian Centre for Geomechanics
- iii Mine Water and Environment Research Centre, ECU
- v Technical Reviewers
- vii Preface

- Design**
- 3 Management of mine wastes using pit void backfilling methods – current issues and approaches  
*A.A. Puhlovich and M. Coghil*
  - 15 Lessons learned from pit lake planning and development  
*D. Castendyk*
  - 29 What type of lake do we want? Stakeholder engagement in planning for beneficial end uses of pit lakes  
*S.M. Swanson*
  - 43 Generating regional guidance for best practice pit lake closure and reclamation  
*T. Charette and D. Wylynko*
  - 53 Hydrologic and geomorphic design of pit lakes for long-term sustainability  
*L.F. Sawatsky, M.A. Fitch, A.K. Beersing and J.A. Vandenberg*
  - 63 Use of water quality models for design and evaluation of pit lakes  
*J.A. Vandenberg, N. Lauzon, S. Prakash and K. Salzsauler*

- Development**
- 83 Meeting environmental goals for pit lake restoration – factoring in the biology  
*M.A. Lund and C.D. McCullough*
  - 91 The role and value of riparian vegetation for mine pit lakes  
*E.J.B. van Etten*
  - 107 Filling and management of pit lakes with diverted river and mine water — German experiences  
*M. Schultze, W. Geller, F-C. Benthous and P. Jolas*
  - 121 Bacterial sulfate reduction based ecotechnology for remediation of acidic pit lakes  
*R.N. Kumar, C.D. McCullough and M.A. Lund*

- Closure**
- 137 Regulator guidance and legislation relevant to pit lakes  
*H. Jones and C.D. McCullough*
  - 153 Monitoring the water quality of pit lakes  
*C.H. Gammons and N. Tucci*
  - 167 Working near pit lakes – health and safety considerations  
*T. Ross and C.D. McCullough*