24th International Conference on Ground Control in Mining
Lakeview Scanticon Resort and Conference Center
Morgantown, WV
August 2-4, 2005 (Tuesday-Thursday)

Final Program

August 2, 2005 (Tuesday)

7:30 - 8:20 am  Author's Coffee
8:20 - 8:30 am  Welcome & Conference Administrative Announcements
8:30 - 9:12 am  Keynote Address
   Pete Lilly  
   Chief Operating Officer  
   CONSOL Energy, Inc.  
   Pittsburgh, PA
9:12 - 10:00 am  Session I
   Chairman: Klaus-Dieter Beck  
   Foundation Coal Company  
   Linthicum Heights, MD
   1. Analysis and Design of Rib Support (ADRS) A Rib Support Design Methodology for Australian Collieries, M. Colwell, Colwell Geotechnical Services, Caloundra, Australia and C. Mark, NIOSH – Pittsburgh Research Laboratory, Pittsburgh, PA. (p. 12-22)
   2. Evaluation of the Impact of Standing Support on Ground Behavior in Longwall Tailgates, T. Barczak, G. Esterhuizen, and D. Dolinar, NIOSH – Pittsburgh Research Laboratory, Pittsburgh, PA. (p. 23-32)
10:00 - 10:30 am  Break
   Sponsored by: Minova USA Inc.
10:30 am - 12:06 pm  Session II
   Chairmen: Greg Hasenfus  
   CONSOL Energy  
   South Park, PA
   Mike Amick  
   Minova USA Inc.  
   Georgetown, KY
3. **Half a Career Trying to Understand Why the Roof Along the Longwall Face Falls in from Time to Time?** R. Frith, University of New South Wales, Sydney, Australia. (p. 33-43)

4. **Forecasting Roof Falls with Monitoring Technologies – A Look at the Moonee Colliery Experience**, A. Iannacchione, T. Bajpayee, NIOSH – Pittsburgh Research Laboratory, Pittsburgh, PA and J. Edwards, Collective Experience Pty. Ltd., Newcastle, Australia. (p. 44-51)


7. **Outcomes of the Landmark Longwall Automation Project with Reference to Ground Control Issues**, M. Kelly and D. Hainsworth, CSIRO Exploration & Mining, Kenmore, Queensland, Australia. (p. 66-73)

12:06 – 1:06 pm Lunch

1:06 – 3:06 pm **Session III**

Chairmen: Bruce Hebblewhite

University of New South Wales

Sydney, Australia

Chris Mark

NIOSH – Pittsburgh Research Lab

Pittsburgh, PA

9. **Multiple Seam Mining Interactions: Case Histories from the Harris No. 1 Mine**, F. Chase, NIOSH - Pittsburgh Research Laboratory, Pittsburgh, PA, P. Worley, Peabody Energy, Wharton, WV, and C. Mark, NIOSH - Pittsburgh Research Laboratory, Pittsburgh, PA. (p. 79-86)

10. **Analysis of Entry Stability Associated with Multi-seam Mining – A Case Study**, J. Han, Y. Luo, and S.S. Peng, West Virginia University, Morgantown, WV. (p. 87-92)

11. **Failure Mechanics of Multiple Seam Mining Interactions**, R. Zipf, Jr., NIOSH - Pittsburgh Research Laboratory, Pittsburgh, PA. (p. 93-106)

14. **Depillaring and Roof Bolting Practices at Quinsam Coal Mine**, K. Galovich, Quinsam Coal Corporation, Campbell River, Canada, P. Krivokuca, Quinsam Coal Underground Operations, Campbell River, Canada, and A. Craven, Jennmar Corporation, Clearfield, UT. (p. 114-120)

15. **Seam Structure – An Important Criterion for Coal Pillar Design**, K. Unrug and D. Turner, University of Kentucky, Lexington, KY. (p. 121-129)

3:06 – 3:36 pm Break

Sponsored by: Agapito Associates, Inc.

Grand Junction, CO

3:36 – 5:36 pm **Session IV**

Chairmen: Dick Gray

17. **Impacts of Longwall Mining Subsidence on Hydrology, Soil Moisture, and Tree Health in Belmont County, Ohio**, D.L. Bartsch, Ohio Valley Coal Company, Alledonia, OH, R.R. Hicks, West Virginia University, Morgantown, WV, J.R. Runkle, Wright State University, Dayton, OH, and P.M. Craig and C.M. Wallen, Dynamic Solutions, Knoxville, TN. (p. 137-148)

18. **Basics on the Dimensioning and the Extraction of Shaft Safety Zones**, A. Sroka, Freiberg University of Mining & Technology, Freiberg, Germany and A. Preusse and H. Kateloe, RWTH Aachen University, Aachen, Germany. (p. 149-154)


8. **Application of Phenolic Foam in Longwall Mining**, M. Arl, Weber SA, Rouhling, France. (p. 74-78)

6:00 – 8:00 pm Reception

Sponsored by: DuPont Fasloc
Martinsburg, WV

Session V Poster
Chairman: Keith Heasley
West Virginia University
Morgantown, WV


13. **Definition of Ultra-close Multiple-seams and Its Ground Pressure Behavior**, B. Zhang, L. Kang, and Y. Zhai, Taiyuan University of Technology, Taiyuan, China. (p. 110-113)


34. **Non-confirmation Mathematics for Wall Rock Classification for Mine Support**, G. Sun, Heilongjiang Institute of Science and Technology, Heilongjiang, China, Y. Ma, Liaoning Technology University, Liaoning, China, and H. Wu, Heilongjiang Institute of Science and Technology, Heilongjiang,

36. **Studies on Distribution Pattern of and Methane Migrating Mechanism in the Mining-induced Fracture Zones in Overburden Strata**, S. Li, H. Lin, L. Cheng, and X. Wang, Xi’an University of Science and Technology, Xi’an, China. (p. 268-273)

50. **Mechanisms of Rib Sloughing and Methods of Controlling Thick Bolted Ribs**, S. Yang, Taiyuan University of Technology, Taiyuan, China. (p. 372-375)

51. **Supporting Method of the Bolted Strata in Large Deformation Roadways**, S. Yang, L. Kang, and B. Zhang, Taiyuan University of Technology, Taiyuan, China. (p. 376-379)

53. **Detection of Abandoned Mines and Air Passages/Burning Centers of Mine Fires by Combined Electromagnetic Method**, S. Yan and M. Shen, China Coal Research Institute, Xi’an, China. (p. 388-391)

54. **Detecting Abandoned Coal Mine Entries by High Resolution Earth Resistivity Method**, X. Shi, S. Yan, and M. Shen, China Coal Research Institute, Xi’an, China. (p. 392-394)

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**August 3, 2005 (Wednesday)**

7:15- 8:00 am  Author’s Coffee

8:00 – 10:00 am  Session VI

Chairmen: John Hoelle
Moura Coal Mine
Moura, Australia

Bruce Cassidy
Excel Mining Systems
Bowerston, OH


26. **Analysis of Highwall Mining Stability – The Effect of Multiple Seams and Prior Auger Mining on Design**, D. Newman, Appalachian Mining and
Engineering, Inc., Lexington, KY and R.K. Zipf, Jr., NIOSH - Pittsburgh Research Laboratory, Pittsburgh, PA. (p. 208-217)


10:00 – 10:30 am  
**Break**  
**Sponsored by:** Micon  
Pittsburgh, PA

10:30 am – 12:30 pm  
**Session VII**  
**Chairmen:** Naj Aziz  
University of Wollongong  
Wollongong, Australia  
David Bigby  
Rock Mechanics Technology Ltd.  
Staffs, United Kingdom


25. **Ground Control of a Mine Stope in Weak Rocks Subjected to High In-situ Stresses – A Case Study**, C.C. Li, Norwegian University of Science and Technology, Trondheim, Norway. (p. 203-207)

1:00 – 6:00 pm  
**Golf Outing**  
**Chairmen:** Gerry Finfinger  
Steve Tadolini  
Tom Barczak  
NIOSH – Pittsburgh Research Lab  
Pittsburgh, PA

6:00 – 9:00 pm  
**Picnic**
August 4, 2005 (Thursday)

7:20 - 8:00 am  Author's Coffee

8:00 – 9:26 am  Session VIII
Chairmen: Doug Hardman  
J.H. Fletcher & Co.  
Huntington, WV  
David Newman  
Appalachian Mining & Engineering, Inc.  
Lexington, KY


9:26 – 10:00 am  Break  
Sponsored by: Excel Mining Systems  
Bowerston, OH

10:00 am – 11:36 am  Session IX
Chairmen: Tom Blevins  
DuPont Fasloc  
Martinsburg, WV  
Mike Jenkins  
NIOSH – Spokane Research Lab  
Spokane, WA

41. Investigation of Fully Grouted Roof Bolts Installed Under In-situ Conditions, C. Compton and D. Oyler, NIOSH - Pittsburgh Research Laboratory, Pittsburgh, PA. (p. 302-312)

42. Development of the Laboratory Short Encapsulation Pull Test for a Revised


11:36 am – 12:36 pm Lunch
Sponsored by: J.H. Fletcher & Co.
Huntington, WV

12:36 am – 2:36 pm Session X
Chairmen: Jinsheng Chen
Asian-American Coal
Taiyuan, China

Kelvin Wu
MSHA
Pittsburgh, PA


46. **Shear Bond Characteristics in Grouted Cable Bolts**, J.Y. Chen, Golder Associates, Montreal, Canada and H. Mitri, McGill University, Montreal, Canada. (p. 342-348)

47. **Overcoring Techniques to Assess In-situ Corrosion of Galvanised Friction Bolts**, R. Hassell and E. Villaescusa, Western Australian School of Mines, Kalgoorlie, Australia. (p. 349-356)


49. **Mechanical Response of Split-set Rock Bolts in Squeezing Ground**, T. Williams, NIOSH – Spokane Research Laboratory, Spokane, WA, D. Bayer, Hecla Mining Company, Mullen, ID, T. Brady, NIOSH – Spokane Research Laboratory, Spokane, WA, R. Pakalnis, University of British Columbia, Vancouver, Canada, and F. Varley, NIOSH – Spokane Research Laboratory, Spokane, WA. (p. 366-371)
2:36 – 3:06 pm    Break
Sponsored by:     Excel Mining Systems
                  Bowerston, OH

3:06 – 4:42 pm    Session XI
Chairmen:         Frank Kendorski
                  Agapito Associates, Inc.
                  Lombard, IL

Vince Scovazzo
John T. Boyd Company
Richland, WA


Contribution from the following company/agency for publication of the Conference Proceedings is greatly appreciated:

CONSOL Energy, Inc. – South Park, PA
NIOSH – Washington, DC