

## Welcome to the Surface Mining Association for Research & Technology (SMART).

In today's global business world, being able to share information, stay abreast of new technologies and focus research on future needs are critical to maintaining a competitive edge.

That's the thinking behind SMART, an organization that provides an opportunity for surface mining companies to join forces and work together to meet common needs.

SMART is an association of surface mining companies and firms who joined together in 1995 to develop a coordinated approach to meeting the needs of the industry. Collectively, our members have a wealth of knowledge and experience that can be used effectively to direct research programs and influence manufacturers and suppliers in meeting the needs of our industry.

I invite you to join other industry leaders who recognize the value of collaboration as a means of achieving tremendous results. Becoming a member of SMART gives you the opportunity to participate in research activities suited to your organization, take part in workshops that offer real-life solutions and share information with other companies. This is a unique opportunity - SMART is the only group that focuses on operating concerns for open pit mines of North America and Australia.

We know that there is strength in numbers. In fact, we recognize that the greater our membership, the greater our power for collaboration. I encourage you to read the enclosed information and find out how you and your organization can benefit from becoming a member of SMART. We look forward to welcoming you as a new member soon.

Gord Winkel  
Chairperson

## BECOME a MEMBER OF SMART

SMART is an association of mining companies that meet regularly to coordinate the technology development needed by the mining industry. Since 1995, the member companies have directed research and influenced the manufacturers and suppliers to improve surface mining technology and services. SMART actively supports learning seminars, collaborative research projects, and user groups.

Members of SMART include some of the major surface mining companies in North America and Australia. These companies have recognized the value that collaboration can bring to the needs of individual organizations as well as the North American mining industry.

Whether you're looking for additional knowledge through seminars or greater understanding through a research project, you decide how involved you want to be. New participants are always welcome, even with projects already underway.

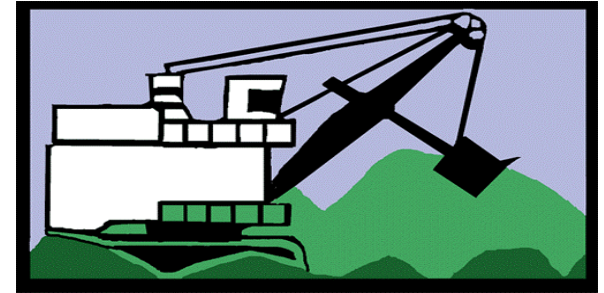
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Or visit our website at:  
[www.smartmines.com](http://www.smartmines.com)



**SMART** Surface Mining Association  
for Research and Technology

**Celebrating  
14 Years!**

**SMART** brings the power of  
collaboration to surface mining companies  
across Canada and North America.

### SMART partners:

Gain the advantage of collaboration  
Share in the knowledge and experience of many  
Work together to develop innovative solutions  
Direct research activities to meet industry needs  
Build partnerships through powerful networking  
Influence industry suppliers and the development  
of new products

### SMART MEMBERS INCLUDE

ArcelorMittal Mines Canada  
Barrick Gold Corporation  
BHP Billiton Diamonds Inc.  
BHP BMA Coal Australia  
Canadian Natural Resources Ltd.  
Cliffs Natural Resources  
De Beers Canada Inc.  
Foundation Coal West Inc.  
Freeport McMoRan Copper & Gold  
Iron Ore Co. of Canada  
Kinross Gold Corporation  
KMC Mining Corporation  
Ledcor CMI  
**Mitsubishi Development Pty Ltd**  
**Newmont Mining**

North American Construction  
NovaGold Resources Inc.  
Peabody Energy Corporation  
Prairie Mines & Royalty Ltd.  
Queens University  
Shell Canada Ltd.  
Suncor Energy  
Syncrude Canada Ltd.  
Teck Resources Limited  
Thiess Pty Ltd  
TransAlta Corporation  
University of Alberta  
University of Arizona  
University of British Columbia  
URS Corporation, Washington Div.

## Learning Seminars

Since 1995, SMART has identified growing challenges for the surface mining industry, and has developed seminars around key areas of concerns. The focus is to facilitate a greater understanding, encourage the sharing of information, and provide opportunities for collaboration. Members can participate and take advantage of tremendous knowledge from around the world, including forums for exchange of information and product needs with equipment manufacturers.

### Upcoming Seminars:

Our next seminar is scheduled for the fall of 2010, at the University of Alberta in Edmonton. **These learning seminars are always of interest to all personnel involved in mine planning, equipment selection, operations and maintenance.**

For information contact  
**Tim Joseph** at 780-492-3810 or 780-619-7742  
tim.joseph@ualberta.ca

### Previous Seminars:

2009: *"better strategies with fewer resources ... "*  
2008: *"Learning from the best" in ops and systems integration*  
2006: *'06 equipment evolutions Address the issues ... Mine On*  
2005: *Managing Risk in a Changing Mine Environment*  
2001: *Maintenance, Operations and \$\$*  
2002: *Solutions for Better Health, Safety & Environment.*  
2001: *Large Heavy Haulers "Is Bigger Better?"*  
2000: *Information Needs of the Mining Industry*  
2000: *Computer Mine Planning Workshop*  
1998: *Large Haulage Truck Transportation*  
1997: *Mine Maintenance*  
1996: *Wireless Communications & Data Handling*  
1995: *Global Positioning Systems in Mining*

For more Information on the following activities, contact the name provided or visit our web site [www.smartmines.com](http://www.smartmines.com)

## Collaborative Research and Projects

Collaborative research has always been the goal of SMART and one of the biggest benefits to members. The real payoff comes when members participate in research activities and projects that meet the needs of their organization. As an added bonus, the strength behind SMART can influence the direction of research, and help to ensure the future needs of the surface mining industry are met.

### Mining Benchmarking Database

SMART has recognized the need for the establishment of a worldwide database that continuously collects mining equipment metrics related to productivity and cost. The number of participants in this project continues to grow. Contact [Tom Demorest](mailto:Tom.Demorest@smartmines.com) at 780-790-5092

### Connectivity and Technology Standards for the Surface Mining Industry

The expanding use of computing and network technology systems in the mining industry on large mining equipment and for mine control systems has been beneficial for productivity improvements. The need to be able to quickly utilize and apply computing and networking technology in the mine has been inhibited. In 2005 this project focused on standards to address and improve the situation. In 2007, a document was released that outlines the criteria, requirements, benefits, and a set of generic guideline specifications regarding hardware and software standards for mining equipment. Contact [tmskinner@shaw.ca](mailto:tmskinner@shaw.ca) at 403 607 1390

### Mine Haul Road Design and Construction

This project completed in 2001 evaluates road construction design techniques. A manual to aid engineers with design and construction of quality haul roads is available.

### Diesel Emissions Evaluation

This project was completed in January 2000. It provides a historical evaluation of the evolution of diesel equipment and engines used in surface mining. The document provides a reference for mine permitting and environmental, health, & safety issues.

## User Groups

As part of SMART's emphasis on bottom line results, user groups tackle specific challenges head-on and develop solid solutions that can benefit surface mining companies across Canada and North America. These user groups are evidence of the power from collaboration.

### Truck - Shovel Equipment User Group

Recognizing that there is strength in numbers, this newest SMART initiative provides members the opportunity to network on issues relating to Trucks, Shovels and other Mine Equipment. Operations and Maintenance items are the focus. Meetings are about 2 times per year.

For information, contact [sthornton@prairiemines.com](mailto:sthornton@prairiemines.com) 780-797-7334

### Large Tire User Group

Members of the Large Tire User Group are continually reaping the benefits of collective effort. This group is focused on achieving maximum tire life, developing common procedures for rim maintenance and handling tire related emergencies such as fires or electrical contact, and working with tire manufacturers in developing "intelligent tire" technology. Meetings are about 2 times per year. For information, contact Ann Pitman, [apitman@barrick.com](mailto:apitman@barrick.com) 775-748-1205 or Bimbo Jones, [bjones@barrick.com](mailto:bjones@barrick.com) at 775-748-1161.

### SMART Standard Technology Committee

This initiative is new for 2009. This group represents the mine operators of SMART and works with the OEMs and OTMs to develop computing, network, and data access system standards for mobile surface mining equipment systems. For information contact [tmskinner@shaw.ca](mailto:tmskinner@shaw.ca) at 403 607 1390.