

A black helicopter is shown in flight against a clear blue sky, with a bright sun flare on the left. A long cable is attached to the helicopter, extending downwards to a dark, rectangular object being lowered, likely a training load for slinging operations.

TOWARD A SAFE DAY EVERYDAY

The Canadian Mineral Exploration Health & Safety Annual Report **2015**

Photo credits:

Jay Fredericks – cover;
David Thompson – p. 5;
Carl Ryan – back cover.

The Association for Mineral Exploration (AME) and the Prospectors & Developers Association of Canada (PDAC) are pleased to present their 11th annual industry environment, health and safety survey report. Here are some of the findings from the 2015 survey.

There were **91 organizations** who responded to the full survey, **down from 99** in 2014. This mirrors a downturn in the industry with mineral exploration expenditures at their lowest since 2005. Although the survey is voluntary, it represents a cross-section of the health and safety performance of government geological surveys and companies active in, and supporting, exploration for precious and base metals, uranium, diamonds, coal and potash.

The survey provides a snapshot of leading indicators related to environment, health and safety as well as a report of incidents throughout the year. More importantly, it has inspired the development of both AME and PDAC's safety workshops as well the associations' new helicopter slinging training presentation – viewable at explorationsurvey.ca. The **504 incidents reported by 37 companies** all present opportunities for learning; and both associations will look at ways of using the data to improve and communicate a culture of environmental management and best practices in health and safety.

THE GOOD ...

Nearly all respondents – **97%** – reported having some degree of health and safety programming, planning and reporting. As in the 2014 survey, **95%** reported having a health and safety program, nearly double the percentage from 2005 when only **49%** reported having a health and safety program. Furthermore, **88%** reported having a policy and **81%** reported having a management plan. The vast majority of organizations responding to the survey conduct simulations (**82%**), conduct task risk analyses (**95%**), discuss safety at worker meetings (**95%**) and discuss safety at Board meetings (**90%**).

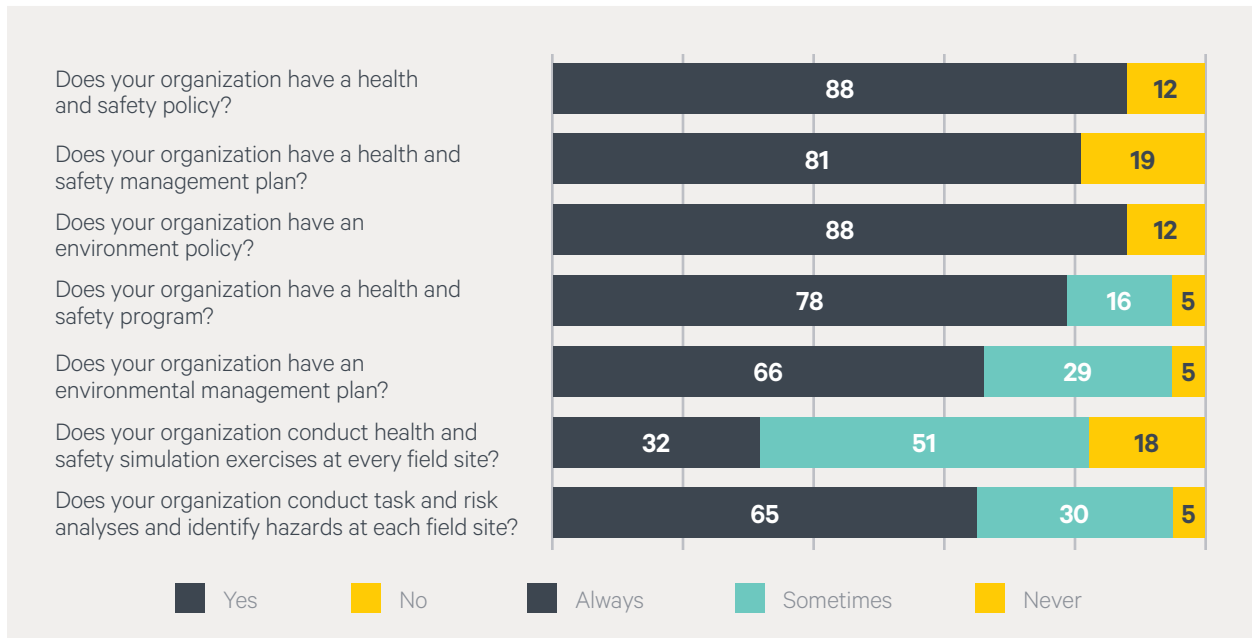
The lost time incident frequency inched up to **0.87** per 200,000 hours from **0.65** in 2014, but down from **1.09** per 200,000 hours in 2013. Meanwhile, The rate for all Canadian industries as reported by the Association of Workers Compensation Boards of Canada, by comparison, reached a record low of **1.56** in 2014 (2015 data will be available in mid-2016). In general, the data indicate that mineral exploration has had a better-than-average incident frequency record compared with other industries since 2012, and the average worker can expect to have a career in mineral exploration without a lost-time injury.

BUT ...

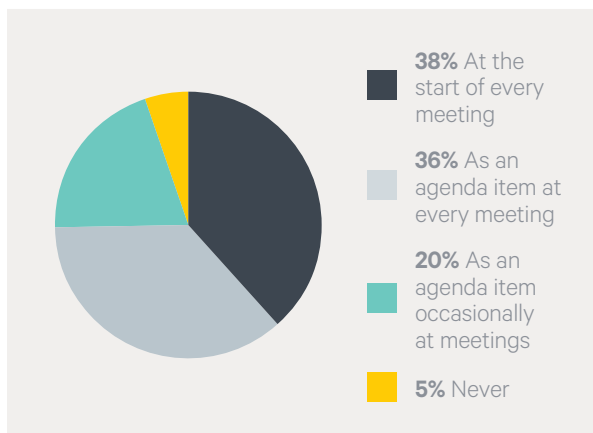
Although **90%** of organizations discuss safety at Board of Director meetings, **23%** only discuss safety if there is an incident. And although **95%** discuss safety at worker meetings, only **74%** always do so. However, there has been slight improvement in these percentages since the 2014 survey. Discussing safety at all board and worker meetings is an important leading indicator of a commitment to a culture of safety within a company.

SAFETY REPORTING

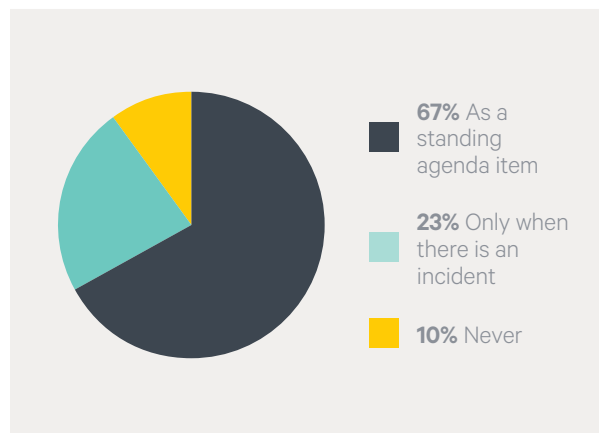
The 2015 survey focused on the various practices in place taken prior to incidents happening. These leading indicators, or proactive measures, vary according to the organization.



DURING WORKING MEETINGS, SAFETY IS DISCUSSED:



FOR BOARD OF DIRECTORS MEETINGS, SAFETY IS DISCUSSED:



LAGGING INDICATORS

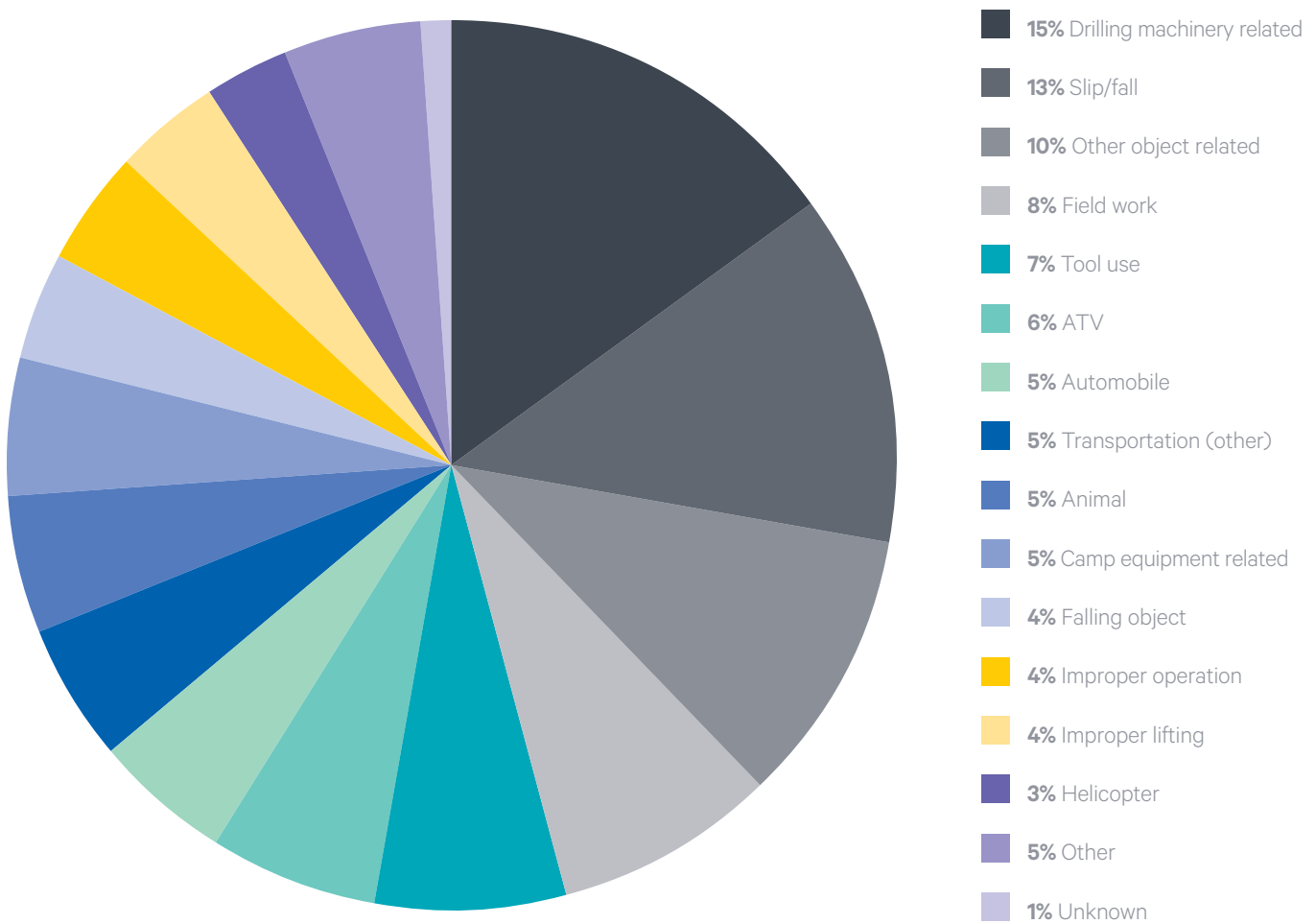
Lagging indicators are measures of actions taken after incidents happened. Although there are lessons learned in figures such as lost-time incidents, these are reactive in nature. However, incidents in the past – whether serious incidents or near-misses, should be treated as learning opportunities.

The statistics below are based on descriptions of **504** incidents reported **37** companies that occurred in 2015. Although there are lessons learned in lagging indicators, figures such as lost-time incidents, these are reactive in nature. However, incidents in the past – whether serious incidents or near-misses, should be treated as learning opportunities.



CAUSE OF INCIDENT

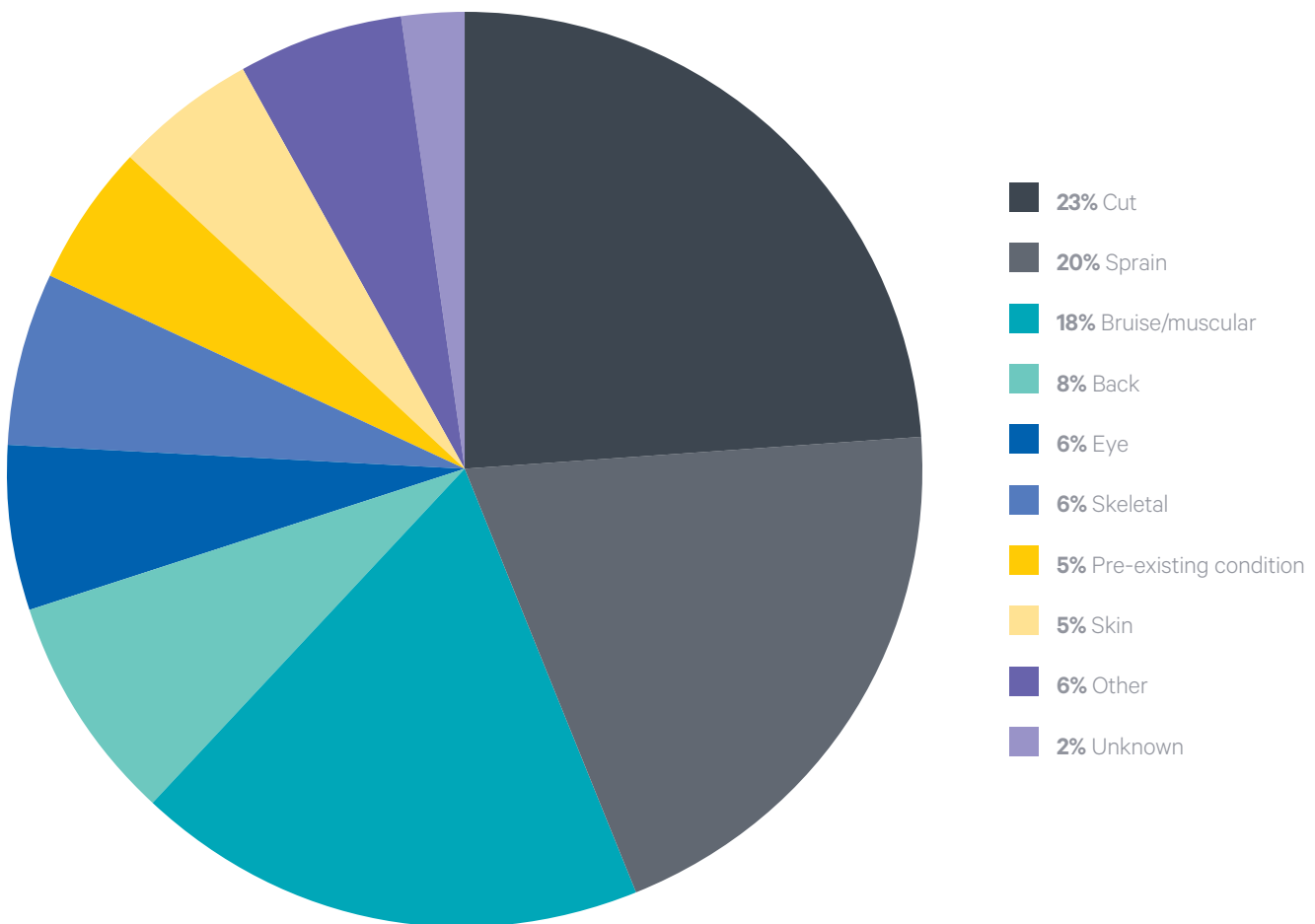
Drilling machinery was attributed to **15%** of incidents, and **3 out of 26 (12%)** of lost-time incidents. Slips/falls were attributed to **13%** of incidents, and a similar proportion – **4 out of 26 (15%)** of lost-time incidents. These continue to be the primary two causes of injuries in mineral exploration, and are often related to other causes. Perhaps the most serious incident reported in 2015, with primary cause reported as falling object, was when a field assistant slipped on ice and was crushed by a tree that fell on him, causing internal injury and resulting in surgery.



NATURE OF INJURY

Cuts continue to be the most prevalent nature of injuries, and account for **24%** of injuries. Although most cuts are minor, one scratch sustained while travelling underground alongside a fan pipe resulted in one month of lost time. Sprains accounted for **20%** of injuries and were followed by bruises and muscular injuries at **18%**.

No injuries were reported for **310 out of 504** incidents. Of these **194** incidents without injury, **6** were environmental incidents related to chemical or fuel spills, and **41** were related to property damage. The majority of other incidents had potential for injury or property damage.

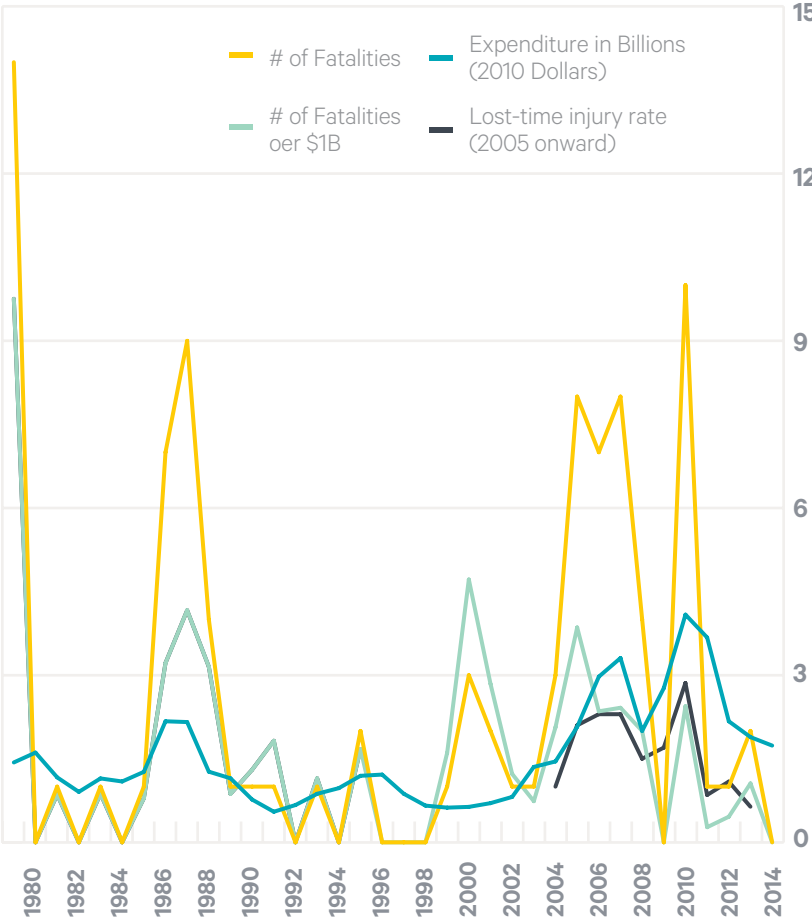


FATALITIES

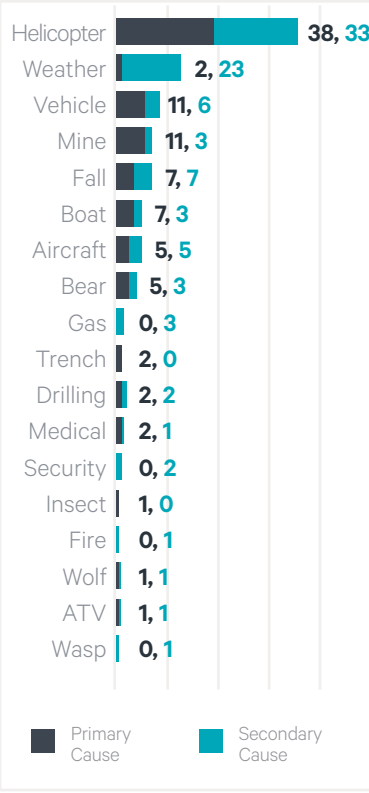
Overall, there have been **95** fatalities in mineral exploration since 1980, an average of nearly three per year although there have been several fatality-free years, most recently in 2015, coinciding with an industry downturn. Reported causes of fatalities, both primary and secondary, are listed below.

Recent data suggest that increased numbers of fatalities and injuries have generally corresponded with peaks of activity in the industry. AME and the PDAC hope that industry can learn from this trend to prevent any further fatalities in Canada’s dynamic mineral exploration industry.

FATALITIES IN MINERAL EXPLORATION IN CANADA 1980-2015



CAUSE OF FATALITIES 1980-2015



WHAT YOU CAN DO

- ▶ Ask your employer or client questions about health and safety.
- ▶ If you are concerned, do not accept the status quo
- ▶ It is every worker's right to refuse unsafe work
- ▶ Before going in the field, take responsibility to seek out information - including resources from the PDAC and AME – available online free of charge.
- ▶ Provide or ask about resources for safety-related topics such as travel and transportation, proper lifting, drill equipment safety, proper footwear and working in icy conditions.

RESOURCES

SAFETY GUIDELINES AND MANUALS

The PDAC Field Safety Pocket Guide is available in English, French and Spanish. The guide includes a variety of safe fieldwork practices that will increase one's awareness of the risks, hazards and dangerous situations inherent in exploration work. The pocket guide is available from the PDAC; it can also be downloaded at <http://www.pdac.ca/policy/health-safety/policy/2011/01/06/health-safety-field-guide>.

A comprehensive source of safety information for mineral exploration focused on Western Canada is AME's Safety Guidelines for Mineral Exploration in Western Canada. The guidelines are available online at www.amebc.ca and from the AME office.

More detailed information is available in the e3 Plus Health & Safety in Exploration Toolkit developed by the Health & Safety Committee of the PDAC. This toolkit is available online at www.pdac.ca/e3plus.

HELICOPTER SLINGING TRAINING

Helicopter slinging training is available at www.explorationsurvey.ca and viewable directly at <http://bit.ly/AMEPDAC>. This intended to be the first of several new online tools designed for AME and PDAC members; please contact the associations if you have suggestions for further tools.

REPORTING

Download the 2016 Canadian Mineral Exploration Environment, Health & Safety Survey incident reporting form at www.explorationsurvey.ca, and complete the 2016 survey online. The annual report and helicopter slinging training presentation are also available here.

OUR 2015 AWARD RECIPIENTS

SAFE DAY EVERYDAY GOLD AWARD

Congratulations to Dominion Diamond Ekati Corporation for achieving **416,500** hours in exploration without a lost-time incident in 2015, and Cameco Corporation Exploration Department for achieving **147,399** hours without a reportable injury.

SAFE DAY EVERYDAY SILVER AWARD

31 organizations are presented with the Safe Day Everyday Silver Award. This award is presented to organizations reporting more than 10,000 hours throughout 2015 without a reportable injury. By comparison, **36** organizations received the award for 2014.

1984 Group of Companies
Adventure Gold Inc
Altius Resources Inc.
Anglo American Exploration
(Canada) Ltd
Auracle Remote Sensing
Benton Resources Inc
British Columbia Geological
Survey
Centerra Gold Inc.
Coast Mountain Geological Ltd
Detour Gold Corporation

DGI Geoscience Inc.
Foran Mining Corp
Geological Survey of
Newfoundland and Labrador
George Downing Estate Drilling
Ltd.
Good Earth Drilling Services Ltd
Independence Gold Corp.
Kiska Metals Corp
Klondike Gold Corp.
NexGen Energy Ltd
Pure Gold Mining Inc.

Purepoint Uranium Group Inc
Rockhaven Resources Ltd
ScoZinc Ltd
Soquem Inc
Stornoway Diamond Corp
TECH Directional Services
TerraLogic Exploration Inc
Transition Metals Corp
Trevali Mining Corporation
Wallbridge Mining Company
Limited
Western Protection Alliance Inc

SAFE DAY EVERYDAY BRONZE AWARD

AME BC and the PDAC have awarded **37** organizations this award for reporting a calendar year without lost time in 2015, compared with **42** organizations in 2014.

AREVA Resources Canada Inc.	De Beers Canada Inc. - Exploration	Lithos Geological Inc
Aurum Geological Consultants Inc	Denison Mines Corp	Manitoba Geological Survey
Avalon Advanced Materials Inc	Durfeld Geological Management	Marathon Gold Corp
Brixton Metals Corporation	Ltd	Ontario Geological Survey
Burton Consulting Inc	Endurance Gold Corp	Orex Minerals Inc
CanAus Coal Ltd	FB Drilling Ltd	Pacific Empire Minerals Corp
Canterra Minerals Corporation	Foraco Canada Ltd	Pacific Ridge Exploration Ltd
Cantex Mine Development Corp	Forum Uranium Corp	Richmond Minerals Inc
Clifton Star Resources Inc	Foundex Explorations Ltd	Rio Tinto Exploration Canada Inc
Clive Aspinall Geological	Geoqwest Excursions Ltd	Royal Nickel Corp
Consulting Services Inc.	Geotech Drilling Services Ltd	SnipGold Corp
Copper Mountain Mining Corp	Gold Reach Resources Limited	Tri Origin Exploration Ltd
Crone Geophysics & Exploration	Grande Cache Coal LP	
Ltd.	Green Valley Mine Incorporated	

SAFE DAY EVERYDAY PARTICIPATION AWARD

Two organizations are recognized for participating in the Canadian Mineral Exploration Health & Safety Survey for ten consecutive years since the national survey's inception.

Avalon Advanced Materials
Geological Survey of Newfoundland and Labrador



TOWARD A SAFE DAY EVERYDAY: *The Canadian Mineral Exploration Health & Safety Annual Report 2015* is jointly produced by the Association for Mineral Exploration British Columbia and the Prospectors & Developers Association of Canada.

AME

800-889 West Pender Street
Vancouver, BC V6C 3B2
Tel. 604.689.5271
www.amebc.ca
info@amebc.ca

PDAC

135 King Street East
Toronto, ON M5C 1G6
Tel. 416.362.1969
www.pdac.ca
info@pdac.ca

For more information or to acquire full survey data (confidential data removed) to help plan your own exploration program, AME BC and PDAC members are welcome to contact Jonathan Buchanan at 604.630.3923 or jbuchanan@amebc.ca.