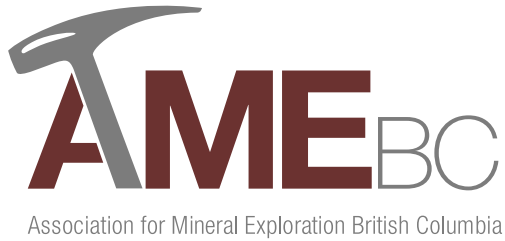


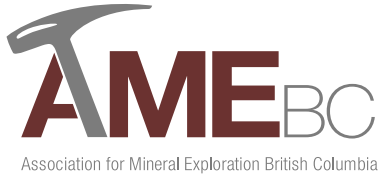
Canadian Mineral Exploration Health & Safety Annual Report 2006





Canadian Mineral Exploration Health & Safety

Annual Report 2006



September 2007

Re: Canadian Mineral Exploration Health & Safety Annual Report 2006

For the last two years, the Association for Mineral Exploration British Columbia (AME BC) and the Prospectors & Developers Association of Canada (PDAC) have been cooperating to produce the *Canadian Mineral Exploration Health & Safety Annual Report*. The objectives are to track health and safety trends and lay the foundation for increasing health and safety awareness and improving standards in the mineral exploration industry.

This report could not be done without the assistance of the 88 companies who took the time to analyze their health and safety performance for 2006 and submit their results in a questionnaire. By this small act, these companies have demonstrated that they are concerned about the health and safety of their workers who carry out the drilling, map the properties, collect the samples, do the line-cutting, provide transportation, and perform countless other tasks.

We think it is important that all field employees and supervisory staff take note of the statistics detailed in this report and also of the accidents that have happened. Remember, to advance exploration safety we must learn from the mistakes of others as we will not live long enough to make them all ourselves. We ask also that all investors take note of the companies that submitted reports to us, especially those with lost time accident free records. There is a good chance that they are among the more efficient and successful exploration companies in the country.

We are aware that of the 920 exploration companies contacted in the 2006 survey, we only received replies from 99 and we would very much like to increase the participation rate. We feel that attention to this type of survey is a component of the Due Diligence that all companies should practise before sending their workers into the field.

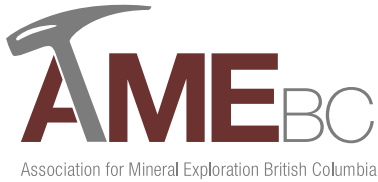
In 2006, 8 persons died in incidents related to mineral exploration in Canada, with 6 of the deaths related to helicopters. The causes of these deaths can be attributed to pilot error, mistakes by personnel on the ground, and mechanical failure. Companies are urged to practice unceasing vigilance with respect to choice of helicopter operator and in training of personnel in best practices around helicopters. The year 2006 was the worst year for fatalities in exploration since 1980 when 14 people died.

We thank participants for their support and hope that you find the report of interest and value. If you have any suggestions for improvement of future reports please contact Jonathan Buchanan, Coordinator, Research & Publications, at AME BC, 604.689.5271 ext 225 or jbuchanan@amebc.ca.

Yours truly,

Ian A. Paterson
Past Chair
Health & Safety Committee
AME BC

Bill Mercer
Chair
Health & Safety Committee
PDAC



Canadian Mineral Exploration Health & Safety Annual Report 2006

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Acknowledgements

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Lise Thompson, 1984 Enterprises Inc.

We thank the following companies for participating in the 2006 Canadian Mineral Exploration Health & Safety Survey, including reporting companies with no active exploration in Canada.

Agnico-Eagle Mines Limited
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Altai Resources Inc.
Amarc Resources Ltd.
Anglo American Exploration (Canada)
Arbutus Resources Ltd.
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Auramex Resource Corp.
Aurizon Mines Ltd.
Aurum Geological Consultants
Avalon Ventures Ltd
Azimut Exploration Inc.
Barrick Gold Corporation
BHP Billiton
Bitterroot Resources Ltd.
Bootleg Exploration Inc.
Breakwater Resources Ltd.
British Columbia Geological Survey
Canarc Resource Corp.
Cariboo Rose Resources Ltd.
Columbia Yukon Explorations Inc.
Copper Ridge Explorations Inc.
Cornerstone Capital Resources Inc.
CVRD Inco Technical Services
- Exploration
De Beers Canada Inc.
Eastfield Resources Ltd.
Emerald Fields Resources Corp.
Equity Engineering Ltd.
Finlay Minerals Ltd.
FNX Mining Company Inc.
Geological Survey, Newfoundland
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Resources

Globex Mining Enterprises Inc.
Golden Rock Products
Goldrush Resources Ltd.
Gossan Resources Limited
Great Basin Gold Ltd.
Great Western Minerals Group Ltd.
Green Valley Mine Incorporated
Hard Creek Nickel Corporation
IAMGOLD Corporation
Imperial Metals Corporation
International Bethlehem Mining Corp.
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Menika Mining Ltd.
Merrex Gold Inc.
Messina Minerals Inc.
Miramar Mining Corporation
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Northern Dynasty Minerals Ltd.
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Pacific Booker Minerals Inc.
PBG Geoscience
Peace River Coal
Platinex Inc.
Redcorp Ventures Ltd.
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Rocher Debole Minerals Corp.
Sabina Silver Corporation

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Seel Enterprises Ltd.
SLAM Exploration Ltd.
South Malartic Exploration Inc.
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Thompson Creek Metals Company
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UNOR Inc.
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Vismand Exploration Inc.
Wallbridge Mining Company Limited
Waseco Resources Inc.
Watts, Griffis and McOuat
West Timmins Mining Inc.
Western Copper Corporation
Western Keltic Mines Inc.
Western Troy Capital Resources Inc.
Wildrose Resources Ltd.
Wolfden Resources Inc.
Xstrata Nickel
Yukon Geological Survey

Summary – 2006 in Review

The second annual *Canadian Mineral Exploration Health & Safety Survey* portrays 2006 as a year of increased health and safety awareness tempered tragically by an increased number of lost-time accidents and fatalities. The causes of these fatalities, as in previous years, are largely transportation-related. Lost workday accidents continue to be dominated by slips and falls and drilling machinery related incidents.

The survey had a relatively low response rate. Out of 920 companies contacted, 99 companies – just over 10%, filled out the survey. Of these, 88 companies reported exploration work in Canada in 2006, an increase over the 76 in the 2005 inaugural year of the survey. Companies reported 415,125 person days of activity.

“Does your organization have a Health and Safety Program?” Out of 90 companies who responded to this question, 57 companies (63%) said yes. The ultimate objective is a sincere “Yes” in 100% of replies. The 2006 survey marks a large improvement over 49% in 2005 and 43% in the 2004 survey conducted by AME BC of companies active in British Columbia and Yukon.

For 2006, 451 incidents were reported in total. Of these, 358 were reported either as medical aid, first aid, and near misses. 32% required medical aid (including 79% of lost workday accidents), 54% required first aid (including 19% of lost workday accidents), and 15% were near misses (including one lost workday accident). Under-reporting of near misses – incidents without injury – may account for the decline since the 2005 survey when near misses accounted for 49% of incidents. The ratio of incidents without lost workdays to lost workday accidents is 10:1.

There were 43 lost workday accidents (9.5% of all incidents), resulting in 12,453 lost workdays (including the equivalent of 6,000 lost workdays for two fatalities). It must be remembered that these figures do not include six fatalities which were not reported to us through the questionnaire. The frequency of lost workday accidents per 200,000 workday hours was 1.7 for surface exploration and geological work (up from 0.5 in 2005) and 2.4 for drilling, underground mining aimed at exploration, and other activities (up from 1.6 in 2005). In 2006, other activities included contracted supply, transportation, and other services not reflected in the 2005 survey. Generally, although fewer hours were reported in the 2006 survey compared to the 2005 survey, the number of reported lost workday accidents had increased from 2005.

Surface Exploration and Geological Work: A Summary

Respondents reported 177,876 person days of activity, down from 337,556 person days of activity in 2005. The decline in reporting is due mainly to lack of reporting from several large exploration projects in Quebec, but is also due to labour and equipment shortages.

The two fatalities which were reported are discussed in the following section. A geologist in Yukon was struck by the front rotor of a helicopter during a toe-in landing, and a field assistant in Quebec drowned while attempting to cross a river in a Zodiac-type boat.

There were 15 lost workday accidents (4 requiring first aid, 10 requiring medical aid, and 1 near miss), resulting in 12,068 lost workdays (each fatality represents 6,000 lost workdays; other accidents resulted in 68 lost workdays).

The leading cause of lost workdays and accidents continues to be slips and falls. A geophysicist in Nunavut lost 14 days from slipping in the snow and breaking his little finger. Slips and falls resulting in lost workdays generally occur around vehicles or traversing, and can often be avoided by recognizing hazards, wearing proper footwear, and taking one's time.

A total of 105 incidents without lost workdays was recorded. These incidents can be looked upon as a "lead" indicator. If these incidents (which included 60 requiring first aid, 27 requiring medical aid, and 18 near misses) can be addressed, accidents and fatalities will be minimized or eliminated.

The lost workday accident frequency rate (number of lost workdays per 200,000 exposure hours) was 1.7, up from 0.5 in 2005.

Severity of injury rate (number of lost workdays per 200,000 exposure hours) was 1356.9, a reflection of the fatalities. Excluding the fatalities, the rate would have been 7.6.

Transportation, particularly by helicopter and boat, continues to be the leading factor in fatalities in mineral exploration, and this is reflected in the 2006 statistics.

Diamond Drilling, Underground Mining Directed at Exploration, and Other Activities: A Summary

Respondents reported 237,249 person days of activity, down from 254,557 person days in 2005. As with the surface exploration numbers, the decline in reporting is due mainly to lack of reporting from several large exploration projects in Quebec, but also due to labour and equipment shortages.

No fatalities were reported in the survey.

There were 28 lost workday accidents (24 requiring medical aid and 4 requiring first aid), resulting in 385 lost workdays.

The leading cause of lost workday accidents was slips and falls. Examples include a slip during underground exploration resulting in 42 lost workdays, and a slip on ice while disposing of garbage resulting in 27 lost workdays.

Drilling machinery and equipment related causes are also of great concern. In November, a driller inhaled hot gas from a water supply coil heater, resulting in medevac and 120 lost workdays. One worker lost his finger because of moving machinery, resulting in 56 lost workdays. Another worker had a tendon cut in the hand from a slipped pipe wrench, again resulting in 56 lost workdays.

A total of 143 incidents without lost workdays was recorded. These incidents can be looked upon as a "lead" indicator. If these incidents (which included 77 requiring first aid, 50 requiring medical aid, and 19 near misses) can be addressed, accidents and fatalities will be minimized or eliminated. In addition, there were three lost workday accidents for which no amount of lost time was recorded – including one driller helper whose small finger was partially amputated.

The lost workday accident frequency rate per 200,000 exposure hours was 2.4, up from 1.6 in 2005. The severity rate throughout Canada for diamond drilling, mining, and other activities was 32.5, compared with 503.7 in 2005 (32.3 excluding a fatality). However, this rate does not reflect six helicopter-related fatalities not reported in the survey, and inconsistencies in lost time reporting.

Figure 1: Mineral Exploration Safety Statistics Summary 2006

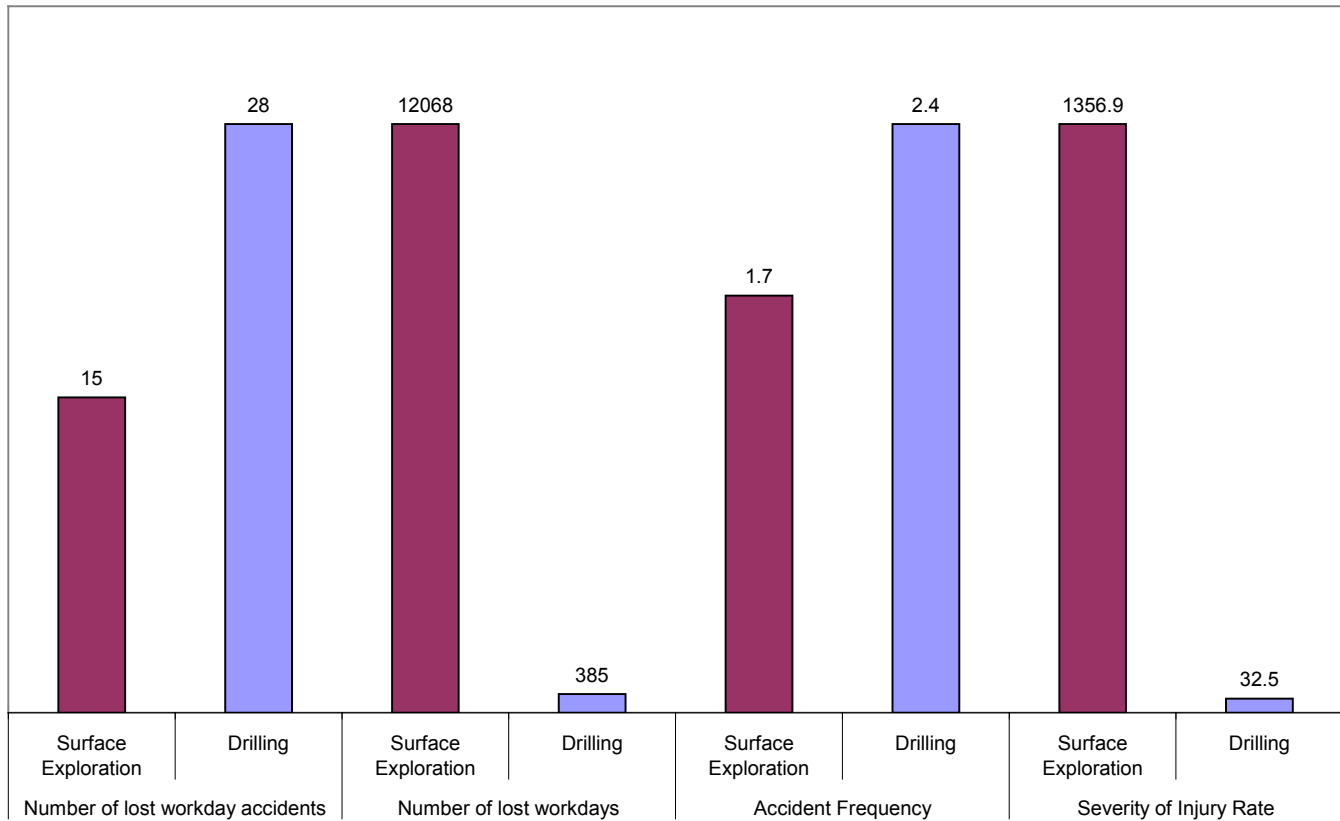


Table 1: Canadian Mineral Exploration Safety Statistics by Province and Territory 2006

Province	Category	NL	NS	NB	QC	ON	MB	SK	AB	BC	YT	NT	NU	N/A	Canada
Questionnaires returned from active companies		5	1	2	13	24	10	3	2	45	10	7	9	1	88
Person days of activity	Surface exploration	8,631	90	1,184	28,677	56,076	2,434	4,130	270	41,507	4,671	994	17,635	11,577	177,876
	Drilling/Mining/Other	11,731	90	0	91,088	59,401	9,352	9,546	193	37,817	5,664	394	17,929	3,044	237,249
	Total	20,362	180	1,184	119,765	105,477	11,786	13,676	463	79,324	10,335	1,388	35,564	14,621	415,125
Equivalent no. of exposure hours	Surface exploration	86,310	900	11,840	286,770	560,760	24,340	41,300	2,700	415,070	46,710	9,940	176,345	115,773	1,778,758
	Drilling/Mining/Other	117,310	900	0	910,880	504,010	93,520	95,460	1,930	378,170	56,640	3,940	179,293	30,437	2,372,490
	Total	203,620	1,800	11,840	1,197,650	1,064,770	117,860	136,760	4,630	793,240	103,350	13,880	355,638	146,210	4,151,248
Number of Fatalities	Surface exploration	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	Drilling/Mining/Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Number of lost workday accidents	Surface exploration	0	0	0	1	0	0	0	0	0	0	0	0	0	2
	Drilling/Mining/Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	1	0	0	0	0	0	0	0	0	0	2
	Surface exploration	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Drilling/Mining/Other	3	0	0	3	3	2	0	0	11	2	0	3	1	28
	Total	3	0	0	4	3	3	0	0	15	4	0	7	3	43
Number of lost workdays	Surface exploration	0	0	5	6000	0	1	0	0	10	6001	0	49	2	12068
	Drilling/Mining/Other	18	0	0	6	35	2	0	0	286	3	0	30	5	385
	Total	18	0	5	6006	35	3	0	0	296	6004	0	79	7	12453
Accident Frequency	Surface exploration	0.0	0.0	16.9	0.7	0.0	8.2	0.0	0.0	1.9	8.6	0.0	4.5	3.5	1.7
	Drilling/Mining/Other	5.1	0.0	0.0	0.7	1.2	4.3	0.0	0.0	5.8	7.1	0.0	3.3	6.6	2.4
	Total	2.9	0.0	16.9	0.7	0.6	5.1	0.0	0.0	3.8	7.7	0.0	3.9	4.1	2.1
Severity of injury rate	Surface exploration	0.0	0.0	84.5	4184.5	0.0	8.2	0.0	0.0	4.8	25694.7	0.0	55.6	3.5	1356.9
	Drilling/Mining/Other	30.7	0.0	0.0	1.3	13.9	4.3	0.0	0.0	151.3	10.6	0.0	33.5	32.9	32.5
	Total	17.7	0.0	84.5	1003.0	6.6	5.1	0.0	0.0	74.6	11618.8	0.0	44.4	9.6	600.0

Definitions and notes:

- Lost workday accident frequency:** Number of lost workday accidents per 200,000 exposure hours
- Lost workday accident severity:** Number of lost workdays per 200,000 exposure hours
- Number of hours per day worked is 10 unless otherwise reported by participants.
- Number of lost workdays and severity rate incorporate time charge of 6,000 person days per fatality (American National Standard).
- Abbreviations: NL – Newfoundland & Labrador; NS – Nova Scotia; NB – New Brunswick; QC – Quebec; ON – Ontario; MB – Manitoba; SK – Saskatchewan; AB – Alberta; BC – British Columbia; YT – Yukon; NT – Northwest Territories; NU – Nunavut; N/A – not available – national data not submitted according to province worked.
- Number of questionnaires per province/territory does not add up to Canadian total as many companies worked in multiple jurisdictions.

Discussion of Questionnaire Results

A total of 920 potential participants were contacted including mineral exploration and mining companies, consulting geologists, and government geological surveys. Of these, 96 responded, and 88 reported exploration work in Canada in 2005. The responses represent approximately 30% of the \$1.7 billion spent in 2006 on mineral exploration and deposit appraisal, as reported by Natural Resources Canada (Figure 2a).

Responses to the 2006 survey (Figure 2b) more closely represented the amount spent on mineral exploration throughout Canada than in 2005, although fewer hours were reported. Still, Quebec continues to report a relatively high percentage of activity, while the Northwest Territories and Saskatchewan similarly continue to report a disproportionately low percentage of activity. Our aim for 2007 is to have a larger proportion of mineral exploration companies and geological surveys respond to have survey results are more representative of the mineral exploration community.

Figure 2: Canadian Mineral Exploration Expenditures and Exposure Hours Reported to AME BC and PDAC

Figure 2a

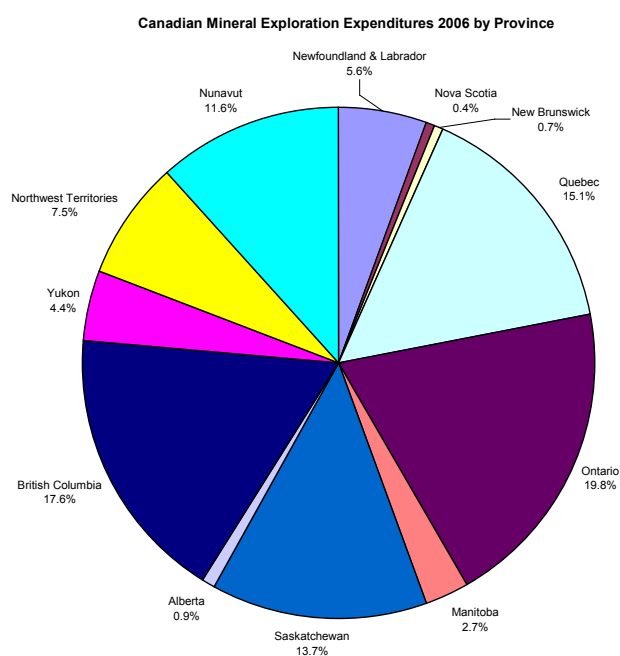
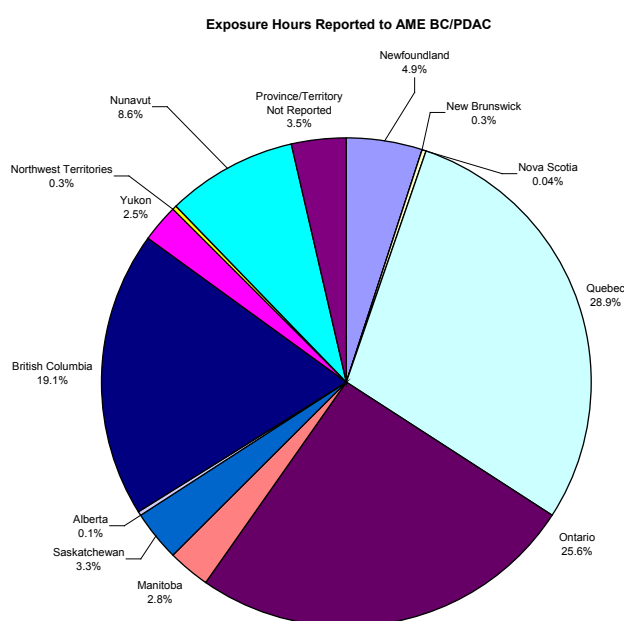


Figure 2b



Results of the survey for each province and territory are available in Table 1, and have been summarized in Figure 1.

As discussed in the summary, the ratio of incidents without lost workdays to lost workday accidents was 10:1, similar to 11:1 in 2006. There were 408 incidents and near misses that did not result in lost workdays.

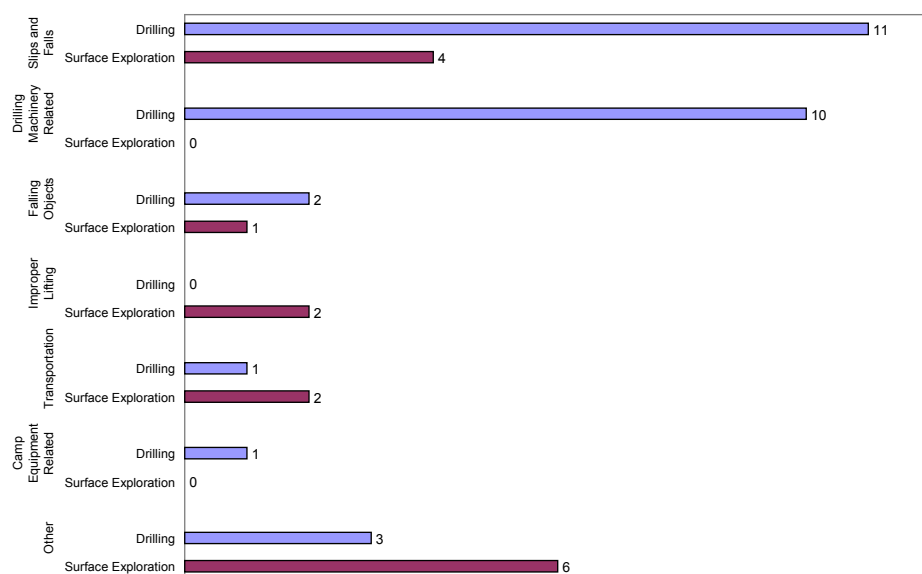
Causes of 258 incidents were classified as follows (no cause was reported for 193 incidents):

	Number of Incidents with with Lost Workdays	Number of Incidents with No Lost Workdays	Total	Percent of All Incidents
Slips and Falls	15	40	55	21%
Drilling Machinery	10	36	46	18%
Camp Equipment	1	36	37	14%
Improper Lifting	2	13	15	6%
Automobile	0	15	15	6%
Falling Objects	3	7	10	4%
Helicopter	1*	4	5	2%
Weather	0	4	4	2%
Snowmobile	0	2	2	0.8%
Other	9*	60	69	27%

*Includes fatality

Slips and falls are the consistently the single leading cause of incidents. Mineral exploration activity presents a number of slippery surfaces (e.g. ice, wet drill decks, boulders) and opportunities for falls (e.g. uneven terrain including muskeg). Camp equipment and drill equipment combined accounted for nearly one-third of incidents. Personnel should always use the required equipment properly – many cuts are caused by using improper equipment or by not using caution when handling sharp objects or machinery.

Figure 3: Causes of Lost Workday Incidents

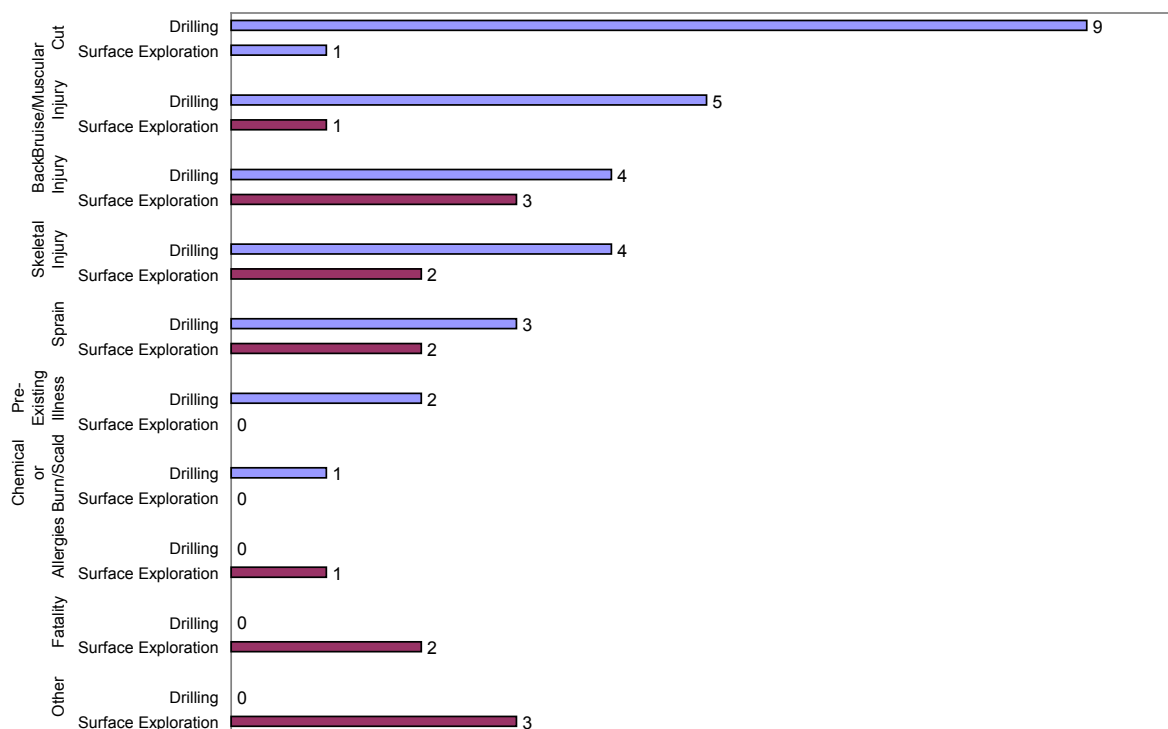


The nature of 378 incidents was classified as follows (no nature of incident was reported for 73 incidents):

	Number of Incidents with with Lost Workdays	Number of Incidents with No Lost Workdays	Total	Percent of All Incidents
Cut	10	97	107	28%
Bruise/Muscular	6	64	70	19%
Sprain	5	50	55	15%
Back Injury	7	6	13	3%
Skeletal	6	7	13	3%
Chemical/Burn/Scald	1	6	7	2%
Eye Injury	0	6	6	2%
Pre-Existing Illness	2	3	5	1%
Allergies	1	3	4	1%
Fatality	2	0	2	0.5%
Other	4	58	62	16%
None	0	42	42	11%

Cuts are consistently the single leading type of incidents, and are almost always related to the leading causes of accidents: slips and falls, and camp and drilling equipment. The most severe cut-related injury occurred when a driller's finger was caught when changing a cylinder head. When it was released, the finger was caught, and needed to be amputated. Bruises and muscular injuries were the second leading nature of incidents. Proper use of equipment and careful movement on slippery and uneven surfaces can prevent most bruise and muscle related injuries.

Figure 4: Nature of Lost Workday Incidents



Details of lost workday accidents for surface exploration and geological work are tabulated in Table 2, and details for lost workday accidents for diamond drilling, underground work, and other activities are tabulated in Table 3. These tables clearly indicate the range of situations in which incidents arise, and provide anecdotal evidence of the importance of personal protective equipment, health and safety training, and due diligence.

Conclusions and Recommendations

- Helicopter and boat-related incidents continue to be the primary source of fatalities in the mineral exploration sector (for further information please see Incident Alerts on 14).
 - Helicopter pilots and mineral exploration personnel must work together to ensure that rigorous briefings on helicopter safety procedures take place before commencement of operations and regular refreshers or safety meetings are arranged. When working around helicopters, unceasing vigilance is required by helicopter crew and exploration personnel.
 - Companies must ask to see the safety and maintenance records of any helicopter company they are considering for contract work and include this information as an important consideration in the choice of contractor.
 - Boats should be used with extraordinary caution, and operators should be properly trained in their operation. Operators of motorboats should also have a Pleasure Craft Operator Card. Life jackets must be worn at all times.
- Employers are legally responsible to ensure that all employees and contractors:
 - have safety programs in place
 - provide personal protective and safety equipment
 - adequately train personnel
 - ensure employees and contractors follow safe work guidelines
- Standardized drilling training such as the Ontario Common Core Training surface drilling training can improve the safety of drilling programs. For more information visit the Canadian Diamond Drilling Association website at www.canadiandrilling.com/training.html.
- The reporting of lost workday accidents and all incidents (including near-misses, medical aid, and first aid incidents not resulting in lost workdays) should be made mandatory. As the ratio of incidents without lost workdays to lost workday accidents is 10:1, incidents without lost workdays provide opportunities for companies to develop and improve their health and safety procedures.

Fatalities in 2006

Eight persons died in the course of mineral exploration activities in Canada in 2006. Only two were reported as a result of the questionnaire. Three of the fatalities were in BC, two in the Yukon, two in Saskatchewan and one in Quebec. Transportation related causes were the direct cause of seven of the fatalities and a bear mauling the cause of one. The fatalities included three field assistants, two drillers, two pilots, and one geologist. All employees were employed either directly or indirectly (through contractors) by junior companies except for the Yukon accident where a government geologist was involved.

This compares with a 2005 total of three fatalities including one bear mauling, one wolf mauling, and one driller who drowned when his bulldozer sunk through ice.

Table 2: Lost Workday Incidents in Surface Exploration and Geological Work - 2006 Summary Report

Date	Prov/ Terr	Occupation	Type	No. of Lost Workdays	Nature of Injury	Cause	Description	Action Taken
Sep	OC	Field Assistant	FA	6000	Fatality	Other	The field technician left the base camp alone to cross a river in a Zodiac-type boat. For unknown reasons, he fell overboard approximately 250 metres away from shore. The immediate helicopter-borne and boat support rescue attempts failed and the technician died from drowning. The life jacket remained in the boat.	
Jul	YT	Geologist	MA	8000	Fatality	Helicopter	Front rotor strike during pick-up with toe-in landing	
-	NU	Labourer	MA	20	Skeletal	Other	The worker was assisting with the use of a gas ice auger for the purpose of taking ice depth measurements. The sleeve of his winter coat became caught in the auger shaft causing it to twist, and fracturing his lower arm.	
-	NU	Geologist	MA	14	Other	Falling Objects	The worker was inside of a transport plane assisting with the tie-down of 45 gallon drums. He was bent forward in a crouch position when the tie down bar, which crosses over the tops of the barrel, slipped. He was struck to the back of the head, just below his safety helmet.	
May	NU	Geophysicist	MA	14	Skeletal	Slips/Falls	Slipped in the snow and broke the little finger on his left hand	First aid at camp and then taken to clinic by helicopter where the finger was set
Jul	BC	Surface Crew	FA	7	Pre-existing	Improper Lifting	Reaggravated pre-existing back injury due to improper lifting	Light duty and doctor's visit
Jul	NB	Geologist	MA	5	Back Injury	Improper Lifting	Injury resulting from lifting objects from automobile trunk	Treated by physician
May	YT	Field Assistant	MA	1	Allergies	Other		
Aug	n/a	Line Cutter	MA	1	Back Injury	Other	Worker awoke with back pain - was line cutting previous day	Worker reported to First Aid and was given ibuprofen. Was unable to work. Visited chiropractor following day (worker had been involved in serious mountain bike accident the previous year).
Sep	BC	Surveyor	FA	1	Bruise/ Muscular	Slips/Falls	Worker fell and injured her head	Worker taken to hospital for stitches. Worker took day off to recover.
Sep	n/a	Contractor	MA	1	Cut	Other	Worker cut himself while washing a beaker.	Worker visited clinic, quit, and moved out-of-province.
Aug	BC	Field Assistant	MA	1	Other	Other	Developed hernia while soil sampling	The worker was taken to clinic by helicopter and received an antibiotic.
May	NU	Line Cutter	FA	1	Other	Other	Trouble urinating	
Sep	BC	Field Assistant	NM	1	Sprain	Slips/Falls	Field hand was unhooking helicopter sling load. Pilot overshot the area and field hand slipped trying to move out of the way, slightly wrenching his back.	Discussions with pilot and field assistant to discuss possibility of improving procedures
Mar	MB	Geophysicist	MA	1	Sprain	Slips/Falls	Worker fell off snowmobile.	

Table 3: Lost Workday Accidents in Drilling, Underground Mining Directed at Exploration, and Other Activities - 2006 Summary Report

SURFACE DRILLING								
Date	Prov/ Terr	Occupation	Type	No. of Lost Workdays	Nature of Injury	Cause	Description	Action Taken
Nov	BC	Driller	MA	120	Chemical or Burn/Scald	Drilling Machinery Related	Inhaled hot gas from water supply coil heater	Medevac to hospital, and then went home
Aug	BC	Driller Helper	MA	56	Skeletal	Drilling Machinery Related	Moving machinery cut off finger.	Worker was taken to hospital.
Feb	ON	Driller	MA	30	Cut	Falling Objects	Amputation of finger at the knuckle as a result of manipulating the stuck cylinder head and a sudden release catching the finger	Modified the procedure for cylinder head changing and assembly on the floor to create less risk. Initiated a full crew review of all drilling procedures.
Sep	NL	Driller Helper	MA	6	Cut	Drilling Machinery Related	When removing core from tube, worker had hand over bottom end of tube. A piece of core fell and cut finger.	First Aid was administered. The worker received medical attention off-site. Stitches were required.
Jul	NL	Driller Helper	MA	7	Bruise/ Muscular	Slips/Falls	Worker slipped while fueling up on muskeg. The worker fell to the ground, bruising arm and side.	The worker received medical attention off-site.
Sep	n/a	Driller	FA	5	Back Injury	Drilling Machinery Related	While lifting drill rod, the driller felt the rod slide and back began to hurt. The patient felt nauseous and vomited.	The worker was taken to camp by helicopter, visited by First Aid attendant, and later transported to town. He did not return to work. There was no history of back pain.
-	BC	Driller	MA	5	Skeletal	Drilling Machinery Related	A wrench cracked bone just below the knee.	The worker received medical attention and did not return to work.
Oct	NL	Driller Helper	MA	3	Bruise/ Muscular	Slips/Falls	The worker slipped on rock outside the drill and bruised back.	The worker received medical attention.
Jul	QC	Driller Helper	MA	3	Cut	Drilling Machinery Related	Finger was stuck between the pressure gauge and tower.	The worker was transported to the nearest medical centre.
Mar	ON	Driller Helper	MA	2	Back Injury	Slips/Falls	While bending to attach swivel plug, the worker misjudged footing and fell. The worker twisted his back (lumbar strain).	All procedures were followed. Company reviewed the incident with contractor management and performed a site inspection. The incident was reviewed in crew meetings.
Sep	BC	Driller Helper	MA	2	Cut	Slips/Falls	The worker slipped on a wet drill deck and fell on file he was carrying.	First aid was administered on site, followed by a tetanus shot in the hospital.
May	NU	Driller Helper	FA	2	Sprain	Slips/Falls	Worker slipped on ice while carrying a drill rod and sprained his shoulder.	The worker went out on regular grocery flight and spent 3 days on light duty at the drill shop.
Sep	YT	Driller	FA	2	Sprain	Slips/Falls	Worker slipped while setting up drill.	Received first aid.
Oct	BC	Driller	MA	1	Cut	Drilling Machinery Related	Sleeve caught in fan belt of rig	Person taken to hospital
Dec	MB	Driller Helper	MA	1	Back Injury	Slips/Falls	Worker fell off drill.	
Jun	BC	Labourer	MA	1	Bruise/ Muscular	Other	Individual hit his right elbow on a plank while building a drill pad around June 10, but it didn't bother him. On the 25th, he hit his elbow on a tree and caused discomfort. On the 27th, there was swelling and pain doubled so he went to first aid. He was sent to a doctor.	
Oct	BC	Driller Helper	MA	1	Bruise/ Muscular	Slips/Falls	Worker slipped on icy trail, fell on back, and injured tail bone.	First Aid was administered. The worker was transported to the local medical clinic.
-	BC	Driller Helper	MA	1	Cut	Drilling Machinery Related	Hand was pinched in the chuck.	The worker received medical attention.
Mar	BC	Driller Helper	MA	1	Cut	Falling Objects	Drill rod stack fell on the worker's head.	The worker was taken to hospital.
Nov	MB	Driller Helper	MA	1	Cut	Drilling Machinery Related	Cut to finger	
Aug	QC	Driller Helper	FA	1	Pre-existing	Other	Hard physical work	Time off
UNDERGROUND MINING DIRECTED AT EXPLORATION								
Date	Prov/ Terr	Occupation	Type	No. of Lost Workdays	Nature of Injury	Cause	Description	Action Taken
Aug	BC	Miner	MA	56	Cut	Drilling Machinery Related	Pipe wrench slipped, cutting a tendon in the hand.	Worker was taken to hospital.
May	BC	Miner	MA	42	Skeletal	Slips/Falls	Worker slipped and broke ankle.	Worker was taken to hospital.
Jul	NU	Miner	MA	1	Skeletal	Slips/Falls	Broken foot.	The worker was given first aid and sent to the hospital.
OTHER ACTIVITIES								
Date	Prov/ Terr	Occupation	Type	No. of Lost Workdays	Nature of Injury	Cause	Description	Action Taken
-	NU	Camp Personnel	MA	27	Back Injury	Slips/Falls	The worker was walking outside from the kitchen facility to dump some garbage when he slipped and fell on the icy walk, injuring his lower back.	
Jun	ON	Cook	MA	3	Bruise/ Muscular	Other	While riding on an ATV, the Cook was frightened by the sighting of a bear. He lost control of the vehicle, resulting in serious bruising and a broken rib.	The cook was sent to the hospital.
Jul	QC	Other	MA	2	Pre-existing	Other	Worker called in with abdominal pain.	Light duty until the end of August
May	YT	Other	MA	1	Sprain	Camp Equipment Related		

Summaries of the fatalities are as follows:

Helicopter related fatalities

1. On July 26, 2006, a geologist walked into the main rotor blades of a Hughes 500 while it was performing a toe-in landing procedure. According to the Yukon Workers Compensation Health and Safety Board, the direct cause of the fatality was a combination of the worker and the pilot both departing from critical safe work procedures. The worker should have approached the helicopter in a crouched position as he was trained to do – he did not. The pilot at one point lost sight of the worker and should have aborted the landing.
2. On September 19, 2006, a Bell 206 Jet Ranger crashed after take off into a marshy area near Alice Arm while in the process of transporting the dayshift driller and helper to the drill. The two passengers and the pilot were killed. The Transportation Safety Board reports as preliminary factual information that a transmission mounting broke rendering the aircraft uncontrollable.
3. On August 13, 2006, a Hughes 500 helicopter crashed into a lake in northwestern Saskatchewan while transporting a 2 man line-cutting crew. The helicopter was descending over the glassy surface of a lake near the shore to observe a caribou when the accident occurred. The pilot and passengers managed to exit the aircraft but only the pilot and one passenger made it to shore only 10 meters away. The other passenger drowned probably as a result of injury and being weighed down by heavy clothing and equipment.
4. On September 24, 2006, a Bell 204B crashed while slinging rods between drill sites 22 km southwest of Stony Rapids in northern Saskatchewan. The final Transportation Safety Board Report states that three minutes into the flight the pilot reported that his bubble side window door had come open and he was having difficulty holding the door. The pilot released the sling load, but his continued pre-occupation with the door resulted in the in-flight break-up of the helicopter and a fatal crash. It is likely that the pilot did not fully or properly latch the door upon entering the helicopter. The problem with the door had been noted on previous occasions.

Bear related fatality

On May 28, 2006, near Ross River in the Yukon, an employee of a staking crew was attacked and killed by a sow grizzly. Evidence indicates the employee unknowingly walked along his staking line to within five metres of the sow's den, where she was caring for two three-month-old cubs. Crew members received a very brief radio transmission shortly after 1 p.m., and while the message was difficult to understand, it carried a tone of distress. The helicopter was summoned back and a search was conducted in the area where he was last known to be. A bear was spotted and at 4:30, the police were alerted and told that one of their co-workers was missing. Safety and medical personnel were assembled who eventually located the body in the vicinity of the bear's den. The bear and cubs were shot.

Boating fatality

On September 1, 2006, in the James Bay region of Quebec, a field technician left the base camp alone to cross a river in a Zodiac-type of boat. For unknown reasons, he fell over board approximately 250 meters away from the shore. The immediate helicopter-borne and boat-support rescue attempts failed and the technician died from drowning. The life jacket remained in the boat.

Discussion

It is possible that a number of these accidents could have been prevented. In the accident summaries given above, the following factors emerge as being directly or indirectly contributory to the cause of the accidents.

- A geologist did not approach a helicopter for toe-in pick-up in a crouched position.
- While doing a toe-in pick-up, the pilot lost sight of the geologist.
- A helicopter transmission mount failed.
- A helicopter was descending over a glassy lake to observe a caribou and the pilot misjudged the elevation. Helicopter need not have been over lake or observing the caribou.
- Helicopter pilot was preoccupied with a door which was improperly latched. As a result, the pilot lost control of the machine.
- A field assistant fell overboard and drowned while crossing a river. He was not wearing a life jacket.

The bear mauling accident is in a different category and it is difficult to come up with practical suggestions as to how it could have been prevented by actions of the employer or the employee. The company had previously worked in the area over the last two years and had not experienced any bear problems. The employee was working alone but he was assessed as an experienced bush worker and had attended a bear awareness training course. He carried a radio and an axe but did not have a firearm or bear spray with him.

At time of writing, the Yukon Workers Compensation Board has filed negligence charges against an exploration company, blaming the company for the death of an employee who was killed by a bear. The charges against the company that were laid are considered to be the first of their kind in northern Canada and British Columbia. The charges are unprecedented in the mineral exploration sector and underline the ability of Workers' Compensation Boards and the justice system to lay charges due to perceived negligence, especially following the passing of Bill C-45 in October 2003. Bill C-45 was prompted by the Westray mine disaster in Nova Scotia, which killed 26 miners on May 9, 1992, and makes organizations criminally liable for criminal acts or negligence in the workplace.

It is of note that there have been two other fatal bear maulings in BC and the Yukon in the last 20 years involving mineral exploration personnel. The first in 1987 when a bear attacked a driller's helper at dusk while he was attending the water line. He was alone and had no access to firearm or bear spray. The second happened in 2005 when a prospector was attacked while walking along a forest road.

The eight fatalities in 2006 are the highest in the Canadian mineral exploration sector since 1980, when 14 mineral exploration personnel died in six separate incidents in four provinces. As in 1980, last year's incidents have prompted serious discussion on health & safety (The AME BC Health & Safety Committee was formed following one of the incidents in 1980). Over the past 27 years, both companies and governments have placed increased emphasis on health and safety, but last year's fatalities demonstrate the need for constant evaluation of health and safety procedures. From these discussions, AME BC and PDAC have developed Health & Safety Policy Guidelines for Junior Mineral Exploration Companies. (See page 22)

General Safety Guidelines for Mineral Exploration

Introduction

Safety is prevention of injury when exposed to danger. Most accidents are caused by failure to recognize a potentially dangerous situation and to take the necessary preventive measures. Promotion of safe working practices is the responsibility of all workers, management, and contractors in the mineral exploration industry. Employers and supervisors must provide information, instruction, supervision, and enforcement, when necessary, to protect employees' health and safety. It is also the responsibility of each and every employee to do their work in a safe manner and watch out for the safety of co-workers. It is in the best interests of all individuals to become as knowledgeable and self-reliant as possible regarding safety awareness.

Field supervisors, party chiefs, and crew chiefs should be thoroughly familiar with safe working procedures. Particular attention must be directed to workers entering the mineral exploration industry, specifically workers new to the labour force. It must neither be assumed that any hazard is obvious nor that any safety procedure is necessarily self-evident. Appropriate safety and first aid equipment and suitably trained personnel should be available at all worksites. Implementing onsite safety orientation followed by regular safety meetings and training in the safe use of equipment will help ensure safe work practices.

Workplace and Workforce

There are few occupations which expose individuals to such a variety of hazards as mineral exploration. Several characteristics of Canadian mineral exploration are probably unique to the industry and affect safety considerations and monitoring. The workplace ranges from alpine to near desert and arctic to temperate environments. The unwary could succumb to any one of 20 or more potentially fatal hazards including falls in crevasses or on rough to precipitous ground, avalanches or falling rock, hypothermia, hyperthermia, asphyxiation, exposure, drowning, lightning strikes, tree falls, animal attacks, wasp stings, and a variety of transportation and travel-related causes including aircraft, vehicles, and boats. Mineral exploration is a global industry, and exploration outside Canada presents additional risks, some of which are covered in "Travel and Transportation" below.

The statistics include a large number of students and other temporary personnel with little previous wilderness experience who often work alone or in small isolated groups. However, the 2006 fatalities include a number of experienced pilots, drillers, and geologists – experience can lead to an increased tolerance of risks associated with mineral exploration, particularly helicopter travel.

Incident Alerts

Travel and Transportation

Many potential hazards are more life-threatening than others, particularly those of a travel-related nature. This relationship, although not widely known, has been recognized by several explorationists and is very evident from questionnaire-related safety statistics. The majority of fatalities have resulted from travel and transportation related accidents, including traverses. Helicopters have resulted in 20 fatalities since 1980, and boat-related accidents have resulted in six fatalities, caused by hypothermia and drowning. Many vehicle-related accidents (both automobile and ATV) are life threatening and account for five fatal accidents.

The increased involvement by Canadian geoscientists in foreign exploration projects presents additional risks. A tragic helicopter accident on March 24, 1994, took the lives of three prominent Canadian explorationists and two military pilots involved in an exploration project in Ecuador. This accident may be indicative of the different safety standards existing in developing countries which could affect the lives of Canadians. Guerrilla activity in the Philippines, during which Colin Spence was shot and killed by ground fire while airborne in a helicopter in June 1996, reveals the unanticipated risks of exploration work in politically unstable countries.

All explorationists have a responsibility not only for their own safety, but for that of their co-workers and those working under their supervision. In travel-related situations, would-be or actual passengers must be prepared to express their concerns in support of aborting any travel by air, land or water, whether planned or in progress, for safety reasons with the expectation that their concerns will be given unbiased consideration by management.

Four falls into crevasses in the last 40 years by exploration personnel not adequately equipped or trained in glacier travel have resulted in four fatalities. By contrast, a well-equipped and trained mountaineering expedition into the Mount McKinley area in Alaska experienced 70 falls into crevasses without loss of life.

Helicopters

Helicopters were involved in four fatal accidents in the mineral exploration sector in Canada in 2006, killing six people. Since 1980, 20 people have been killed in such helicopter accidents throughout Canada. There were also four incidents that did not result in any lost workdays in 2006 including two near misses involving tail rotor strikes in the Northwest Territories, one near miss where the helicopter did not restart after being shut down during cold weather, and one first aid incident where an individual was struck by the cowling.

For detailed safety guidelines, refer to the *AME BC Safety Guidelines for Western Canada*, and the Helicopter safety sticker and card. The guidelines and sticker are available online at www.amebc.ca/healthsafety.htm; hard copies are available from the AME BC office.

Toe-in Pick-up Guidelines

Shortly after the fatality during a toe-in pick-up in July 2006, AME BC issued the following guidelines for toe-in pick-ups:

- Toe-in pick-ups carry a higher degree of risk and should be avoided if at all practical. In the past, especially towards the end of the field season, field crews sometimes became less energetic and as a consequence progressively less energy is expended in looking for flat spots for conventional landings. More and more they expect the pilot to pluck them off almost any slope. Crews should get in the habit of finding the best possible pick-up spot on flat ground with good approaches throughout the field season.
- The pick-up locations must be approved by the pilot – by radio if you have one. If you are not in radio contact with the pilot and if he does not land, it is because he does not like your choice of pick-up point. He will go and find a good landing spot and you will have to walk.
- Toe-in pick-ups should only be done with experienced crews that have built up a solid working relationship with the pilot. If the pilot expects to do toe-in pick-ups he will have talked about it in advance at the safety briefing as well as prior to embarkation and disembarkation. If he doesn't mention his preferences regarding toe-in disciplines then you should ask.

- If there are two or more people expecting to be picked up at a toe-in site, it is important that they are in a cluster in such a position that they can be in eye contact with the pilot. Remember - **“See the pilot see you.”** In most cases of toe-in pick-ups, the crew will be at right angles to the length of the machine and on the opposite side of the pilot. The pilot may prefer that all crew enter and exit on the opposite side from the pilot, to preserve weight balance.
- The crew will be crouched, hats removed, equipment stowed in pack and ready to move slowly and confidently one at a time into the machine with their packsacks when they get the nod from the pilot.
- Never walk upslope at a helicopter landing site – reason is obvious. You should always be in a position to step up on the skid – never stepping down on the skid.
- If a passenger is present in the aircraft at a toe-in site, he can help those who are climbing aboard by arranging seat belts at readiness and lifting and stowing packsacks in the cabin.
- All movements around the helicopter should be done slowly and efficiently. Weight transfer onto a skid that is not grounded should not be sudden.
- Sometimes it may be necessary to move round to the other side of the machine to access a cargo door or get in at a door on the other side. This can be awkward and time consuming especially if the machine has an antenna at the front or the terrain is steep. Never duck under the tail boom – you will be well out of sight of the pilot and may get a hot exhaust blast if the machine is a 500D. Avoid going round to the other side of the helicopter if this is possible.
- **THE PILOT IS THE PERSON TO MAKE ALL DECISIONS WHEN IT COMES TO THE HELICOPTER AND ITS CAPABILITIES – NO EXCEPTIONS.**

Boats

A boat was involved in one fatal accident in 2006. This was the first boat-related mineral exploration fatality since 1988, when four people drowned while canoeing between their campsite and an exploration site. Since 1980, seven people have drowned from boating accidents.

Boats should be used with extraordinary caution, and operators should be properly trained in their operation. Operators of motorboats should have a Pleasure Craft Operator Card (see www.tc.gc.ca/BoatingSafety/menu.htm). Life jackets must be worn at all times to ensure safety.

ATVs

All-terrain vehicles (ATVs) were responsible for four lost workday accidents in 2005 and one in 2006, representing 152 lost workdays – three occurred in Yukon, and two occurred in Ontario. Three of the four lost workday accidents involved rollovers, and one occurred on loose bridge planking. We highly recommend that ATV drivers take a training program by Canada Safety Council certified instructors. Please visit www.safety-council.org/training/ATV/atv.htm. The following guidelines have been adapted from AME BC's *Safety Guidelines for Mineral Exploration in Western Canada*.

- **Use four-wheeled ATVs only.** Three-wheeled ATVs have not been available in Canada and the USA for many years, but are once again being manufactured as agreements to discontinue their production have lapsed. Three-wheeled ATVs should not be used under any circumstances, as they have been responsible for many accidents.

- If ATVs are used in the field, we recommend taking a training program from Canada Safety Council certified instructors. For information and a free CD, see www.safety-council.org/training/ATV/atv.htm.
- Always make a pre-ride inspection before you start the engine.
- Do not ride fast on unfamiliar terrain or when visibility is limited. Never ride headlong past your limit of visibility. It is sometimes impossible to see obstructions, holes, and depressions. Always exercise caution.
- If carrying loads or towing a trailer, follow the manufacturer's rated vehicle capacity for loads and speeds.
- Most ATVs are designed to be ridden only by the operator. Their design does not permit carrying a passenger safely, as attested by the many injuries experienced by passengers.
- In particular, avoid the more obvious pitfalls, i.e. steep, rocky or irregular slopes, unsafe speeds, and exceeding your physical capability in righting an overturned ATV.
- Wear a crash helmet, scuff-resistant clothing, gloves, and goggles or face shields.
- Ensure that all ATVs are insured. Check the insurance requirements in each province or territory - \$1,000,000 (minimum) in insurance is recommended.
- Ensure that all ATVs and personnel meet the current provincial or territorial legislation – British Columbia is the only jurisdiction in North America that does not license ATVs.
- No horse play or racing should be permitted – too many accidents have resulted.
- Loading and unloading ATVs from flatbed or pickup trucks can be hazardous. Make sure ramps provide good traction and are securely attached to the truck. ATVs may slide off when ramps are wet, muddy, or icy. Winch them on and off, if possible.
- Special hazards include the following:
 - Sprains or back injuries may occur when picking up a fallen ATV.
 - Burns may result from contact with exposed exhaust pipes.
 - Blind corners on narrow trails or roads may cause collisions with other vehicles or persons unless particular care is exercised – slow down!
 - Unless goggles are worn, overhanging branches may lead to serious eye injuries.
 - When crossing small streams, the depth of water and the type and condition of the banks and stream bed should be checked as they can cause spills.
 - Be aware of the possibility of fallen trees across your trail.
 - Be aware that ATV country is usually bear country – be bear aware.
- The ATV is a valuable aid to the prospector or geologist, and its limitations should be respected.

Bears

On the first day of the field season, a worker in Yukon was mauled by a grizzly bear as he passed within five metres of two bear cubs. Bears also mauled mineral exploration workers in 1987 and 2005.

The principal preventive remedies and recommended procedures in the event of encounters are described in

the AME BC *Safety Guidelines*. These include the following:

- Avoid encounters by awareness of areas where bears are present in large numbers.
- Conceal food odours at camps and incinerate garbage.
- Make noise while traversing (use bells, air horns, etc.).
- Be alert for bear signs.
- Be prepared for an encounter by taking training courses and reading relevant literature.
- Carry bear bangers or a canister of the bear repellent Counter Assault or an equivalent bear spray in a readily accessible location. (See **CAUTIONARY NOTE** below.)
- Have a firearm available at camp and knowledge where to shoot to kill or disable in an emergency. Experience in the safe use of firearms is essential.
- If an attack is unavoidable, be prepared to follow the recommended procedure to survive mauling. This may involve fighting off an aggressive predatory bear with anything at hand.

The use of bear spray is recommended in the event of an attack by a bear. In both 1993 and 1994, two individuals credited the use of bear spray in saving their lives, one of them being seriously injured. Employees must practice with bear spray at the beginning of each season and be conscious of wind direction and the optimum distance for spray use. Also recommended is Gary Shelton's *Bear Encounter Survival Guide*, available in bookstores. Mr. Shelton also advocates the use of a firearm, which federal and provincial government agencies actively discourage field employees from carrying.

The video "Bear Aware" and accompanying manual were produced for the BC Ministry of Forests and provide comprehensive background material. These are available from the Queen's Printer of BC at www.publications.gov.bc.ca. Two videos entitled "Staying Safe in Bear Country" and "Working in Bear Country" were produced by Magic Lantern and are available through www.yukonbooks.com. The government of Yukon bear safety website at www.environmentyukon.gov.yk.ca/fishwild/bearsafety.html and the University of Alberta Earth & Atmospheric Sciences bear safety website at <http://safety.eas.ualberta.ca/node/13> are also excellent sources of information.

CAUTIONARY NOTE: BEAR BANGERS MAY BE DEFECTIVE

Bear bangers, which are devices used to scare away bears, may explode prematurely during use, causing injury to the operator. These are small explosive cartridges which are screwed to the end of a pencil-sized launcher and activated by a trigger. Once activated, the bear banger is launched about 40 metres by a propellant, at which point the main explosive charge explodes with a loud noise.

Failed bear bangers have exploded within several feet of the launch tube, temporarily deafening the operator and presenting dangers of burns and shrapnel.

The bear banger is normally white coloured, sold in packages of six stored inside a clear plastic pouch, and has a shelf life of about two years. **All** of the devices that failed during use and testing had a **grey discolouration**, probably caused by the propellant leaking from within the cartridge. Any bear bangers showing evidence of discolouration should be safely discarded and replaced with new devices in a sealed package. The devices that failed were only one and a half years old, so it is important to inspect and test-fire all bear bangers.

It is also important to check the compatibility of cartridge and firing mechanism. A rim-firing cartridge will not be fired by a centre firing mechanism or vice versa. Always test fire in a safe place before use.

Please note that bear bangers are often considered dangerous goods, and may not be flown on most aircraft.

Slips and Falls

Slips and falls have caused 43% of lost workday accidents reported in the AME BC and AME BC/PDAC safety reports. Two fatalities have occurred over the years, one from a fall on precipitous terrain and the other from a fall into a crevasse. Two other fatalities were directly related to vehicles: one to a fall from the back of a pick-up truck and another from crushing by an overturned ATV. Other fatalities not generally attributed to falls, but directly related, include falls into cold or fast-moving water from boats, which resulted in death from hypothermia and/or drowning.

In 2006, slips and falls were the leading cause of lost workday accidents, causing 11 lost workday accidents in drilling, mining, and other activities; and 4 lost workday accidents in surface exploration and geological work.

The principal preventive strategies are:

- Development and implementation of a safety-awareness attitude with a constant effort to recognize and avoid potentially hazardous conditions
- Adequate footwear with an emphasis on traction and support for most exploration work and hard-toe cover, as required
- Special precaution in winter conditions, particularly on drill sites

West Nile Virus and Sun Protection

Exploration personnel commonly work in environments where sunscreen and insect repellents have to be applied to avoid exposure to sunburn, skin cancer, and West Nile virus. In this type of environment, experienced workers generally wear long pants, long sleeved shirts, and a hat with a big floppy brim. This means that exposure to the sun and mosquito bites is limited to the neck and face and the backs of hands: lotion application is thus minimized.

Recent research (2007) has demonstrated that it is not advisable to apply insect repellent (DEET products) and sunscreen at the same time as, the repellent penetrates the skin in far greater amounts and the sunscreen loses some of its protective ability. High absorption of DEET by the body can lead to toxic effects leading to dizziness, rashes and headaches. If both sunscreen and repellent must be applied, it is recommended that the sunscreen be applied first and the repellent 30 minutes later. Use a product with 35% DEET or less.

Eye Injuries

Eye injuries seldom receive the attention they deserve – they are not fatal, and are not generally reported by the media. However, they are very serious in nature and are easily preventable. Once company active in the United States noted that eye injuries and flushes were the most common injury on their drilling team, attributable to improper use of personal protection equipment, mainly using glasses instead of goggles.

In May 2005, a geophysical assistant in Nunavut removed his sunglasses throughout the day, leading to impaired vision resulting in two lost workdays. Also in 2005, a driller helper got a small splinter in the eye by using an improper tool, also resulting in two lost workdays.

In 2006, eye injuries did not result in any lost workdays. However, the following incidents were reported:

- A driller helper had core fragments enter his eye while attempting to break core to fit into a core box.
- The eye of a welder's helper was injured during an arc flash while not wearing the appropriate personal protective equipment.
- A driller's helper had mud sprayed in the eye while breaking a connection.
- A miner had a foreign object enter the eye while scaling although he was wearing eye protection.
- Geologists had twigs poke their eyes while travelling in the bush.

The following are guidelines from AME BC's *Safety Guidelines for Mineral Exploration in Western Canada*. The guidelines can be summarized as, "Always wear the appropriate personal protective equipment."

- Wear safety glasses at all times while breaking or hammering rock, core splitting, blasting, using a chainsaw, or when visiting mining operations.
- Wear goggles or a face shield attached to a hard hat when hooking up helicopter sling loads.
- Wear safety glasses or goggles when handling chemicals (e.g. battery acid) or corrosive materials (e.g. grout), boosting batteries, or using ultraviolet lamps for extended periods.
- Wear high quality polarizing sunglasses when working at high altitude, or on glaciers, snowfields, and water.

Wolves

In November 2005, a geological engineering student at the University of Waterloo was likely killed by wolves while walking near a remote exploration camp at Points North Landing near Wollaston Lake, Saskatchewan. This may have been the first fatal attack by a non-rabid wolf in 100 years. A coroner's report has not yet been issued as of press time.

Like other animals, wolves are attracted to garbage. It is recommended that camps incinerate garbage daily and remove the remains to a legal dump or bury them in a suitable pit that, when full, is at least one metre deep, and is allowed in the land use permit. The British Columbia Ministry of Environment recommends the following measures if a wolf is encountered (available at www.env.gov.bc.ca/bcparks/explore/misc/wolves/wolfsaf.html):

- Do not allow the wolf to approach any closer than 100 metres.
- Raise your arms and wave them in the air to make yourself appear larger.
- When in a group, act in unison to send a clear message to the wolves they are not welcome.
- Back away slowly. Do not turn your back on the wolf.
- Make noise. Throw sticks, rocks, and sand at the wolf.

Wasps

A geologist died suddenly in 1991 from a massive allergic reaction (anaphylactic shock) following a single wasp sting in a remote area. It is possible that the fatality could have been avoided had epinephrine been available for an immediate emergency injection. Other potentially fatal allergic reactions, some of which are extremely rare, can be caused by drugs (penicillin, codeine, aspirin, sulphur antibiotics, etc.), certain foods and plants, or other insect bites.

The principal preventive measure is an awareness of possible susceptibility to specific allergic reactions and the immediate availability of epinephrine (usually available as an auto-injector such as an EpiPen). Concerned individuals should consult a physician to determine whether they are allergic to epinephrine or other antihistamines. People with auto-injectors should carry them at all times and ensure that they have not expired. An EpiPen should also be included in first aid and survival kits. Co-workers should be instructed how to use the EpiPen in case the victim is unable to do so.

Resources

Safety Guidelines

A comprehensive source of safety information for mineral exploration is AME BC's *Safety Guidelines for Mineral Exploration in Western Canada*. Although the booklet has a western Canadian focus, it is generally applicable throughout Canada, and copies of the manual have been provided to companies operating in the USA and Latin America. A fourth edition of *Safety Guidelines* was released in 2006, and over 23,000 copies have been distributed over the past 26 years. The guidelines are available online at www.amebc.ca/healthsafety.htm and from the AME BC office. AME BC members are entitled to one free copy. Additional copies can be purchased at a cost of \$5.00 each (plus shipping and GST) by phoning 604.689.5271 or emailing info@amebc.ca.

AME BC and PDAC are collaborating on a comprehensive safety manual that will provide detailed procedures and guidelines, to be released in 2008.

Safety Checklists, Stickers, and Cards

AME BC has prepared safety checklists, stickers, and cards to assist in preparedness in the field. A general safety checklist, survival kit checklists, and procedures in the event of a serious accident or fatality are on pages 180 to 182 and 184 of the *Safety Guidelines*.

In 2006, AME BC prepared safety stickers, which have been sent to over 500 active mineral exploration companies. The waterproof stickers covering transportation safety, field work and traversing safety, communication, helicopter safety, and environmental considerations for drilling are available from the AME BC office or in Adobe Acrobat .pdf format at www.amebc.ca/healthsafety.htm. Laminated cards, which can be clipped to safety vests and jackets, are also available.

Workshops & Courses

The AME BC Health & Safety Committee holds an annual Health & Safety Exploration Field Safety Workshop in Vancouver. The workshops have been held since 1984, and annually since 2004. Topics covered have included the following:

- Presentations: - Introduction, Background, Statistics
- Health & Safety Regulatory Environment
 - Mountain & Glacier Travel
 - Aircraft Safety
 - Driving and Vehicle Safety
 - Bear Hazard Safety
 - Emergency Response
 - First Aid Equipment

- Videos :
- Hypothermia – Outdoor Enemy #1
 - Kick Backs & Safe Use of Chainsaws
 - Bear Aware

All personnel involved in mineral exploration should have current First Aid training that is applicable to their work. This usually includes Level 1 or Standard First Aid and a transportation endorsement. In general, first aid training within a crew or camp must meet, and should exceed, local Workers Compensation Board requirements.

Highly recommended for all exploration personnel is a course on Wilderness First Aid designed to provide participants with the confidence and knowledge required to deal with basic emergencies in wilderness settings. In Vancouver, the 40-hour course is offered by Wilderness Alert (1.800.298.9919; **www.wildernessalert.com**).

For courses on Occupational Health & Safety, please consult the following websites:

- Mines and Aggregates Safety and Health Association – **www.masha.on.ca/links.aspx**
- Canadian Centre for Occupational Health and Safety – **www.ccohs.ca**
- CanOSH – **www.canoshweb.org/en/training.html**

Information on additional resources is welcome; please contact AME BC or PDAC.

Health & Safety Policy Guidelines for Junior Mineral Exploration Companies

These guidelines are designed to assist boards of junior exploration companies in setting up effective health and safety policies and protocols within the company. The guidelines are not standards and are not exhaustive. AME BC and PDAC have set the targets of zero fatalities and lowered lost time accidents for the exploration industry. Companies that have health and safety programs are more likely to help industry achieve those targets.

1. DUTIES OF BOARD OF DIRECTORS

- The board of directors should ensure that a health and safety program is in place.
- It may be preferable to appoint one director who will monitor and report to the board on health and

safety implementation.

- Alternatively the company could strike a health and safety committee of the board.
- The chairman of the board should initiate education for all directors as to their responsibilities and liabilities with respect to health and safety in the workplace. This would include all of the following:
 - Understanding of federal Bill C-45, which contains Amendments to the Criminal Code affecting the criminal liability of organizations
 - Understanding of regulations for the area(s) in which the company operates, and those specific to mineral exploration and mining
 - Understanding of the policies of appropriate professional associations with respect to health and safety in the workplace
 - Training on response to serious incidents at worksite, including emergency response, and also response to media questions
- The directors of the company should have a high level understanding of the health and safety risks in company workplaces.
- The board should be notified as soon as possible on all serious incidents in the workplace (medical aids, lost time injuries, fatalities).
- The board should allot resources towards health and safety program in the company.
- The board should ensure that the organization has a Health and Safety mission statement, policy, and plan that implements health and safety protocols and checks periodically that they are appropriate. There should be health and safety targets within the plan.
- The policy should be signed at least by the chairman and preferably the whole board.
- Any mission statement or policy could be incorporated within a general corporate mission statement and/or policy with respect to sustainable development.
- Consider an external review of health and safety policies and procedures.
- Make sure all work places, irrespective of jurisdiction, have the same levels of health and safety standards.

2. REPORTING

- Board meetings should include a report on health and safety performance prior to technical reviews.
- The board of directors, the director, or committee appointed to monitor health and safety procedures, should review with the COO or equivalent the records of statistics.
- Statistics should include hours worked, near misses, first aids, medical aids as well as work days lost, and fatalities.
- Statistics should be maintained with monthly or quarterly reports.
- Accident records should be detailed and signed. Actions taken subsequent to accidents should be recorded.
- The annual report of the company, any interim reports (quarterly reports) and the website should

include a summary of health and safety performance, along with the health and safety policy statement.

- In case of serious accident, if the company does not have the capacity to investigate the causes itself, external auditing should be completed.
- Operating groups or project teams should be encouraged to have safety meetings as follows:
 - Prior to project reports;
 - Once a month; **and**
 - Short “Toolbox” or “tailgate” meetings each day at the worksiteMinutes should be kept for safety meetings.
- Documentation should exist at three levels – office, management and field.

3. TRAINING

- Train the board in field health and safety risks and procedures (as well as social, community and environment).
- Put a training plan in place to ensure that all workers have appropriate training for the tasks to be completed.
- Have safety leadership training as well as task specific training.
- Do not allow work to start without training.
- Have workers sign that they have received training and safety manuals. Insist on signatures that manuals have been read.
- All work places must comply with federal and provincial regulations with respect to health and safety.

4. DUE DILIGENCE CHECKLIST

Questions the board of directors should ask the Chief Operating Officer, Vice President-Exploration, or equivalent.

- ☐ Do you have a corporate health and safety policy?
- ☐ Do you have a corporate health and safety plan?
- ☐ Does the board understand its responsibilities and liabilities?
- ☐ Does the board have appropriate insurance in place?
- ☐ Does the board request a health and safety report from the COO or equivalent prior to other discussions?
- ☐ Does the board of directors annually audit the plan with the COO or equivalent?
- ☐ Is the audit documented in writing, signed and dated?
- ☐ Does the board audit the plan in addition to the annual audit in cases of serious incidents?
- ☐ Do all projects have a designated health and safety leader, manager or monitor (not necessarily a job title)?
Is the person told to shut down work if it is unacceptably unsafe?
- ☐ Does the designated health and safety leader know who to report to in case of an incident?
- ☐ Do all worksites (camps, drills, etc) and regional offices have a valid, tested emergency response plan?
- ☐ Does the response plan include immediate 7/24 communication with COO or equivalent?
- ☐ Are all contractors required to include health and safety to at least the company standards in contracts?
- ☐ Before work starts, has there been an assessment and documentation of the health and safety risks?
- ☐ Are workers inducted for health and safety prior to starting work and supplied with necessary personal

protective equipment?

- ☐ Are all employees given the appropriate training for the tasks required?
- ☐ Who documents training, including names, dates and course topics?
- ☐ Are training records kept?
- ☐ Are employees and contractors given an appropriate health and safety manual?
- ☐ Do employees sign that they have read the manual?
- ☐ Is there auditing of the contractor's worksite and action taken if required?
- ☐ Are health and safety statistics kept?
- ☐ Are the statistics publicly released (minimum: annual report)?

Basic Emergency Response Plan Guidelines for British Columbia

AME BC has worked with the BC Ministry of Energy, Mines and Petroleum Resources to develop a set of *Basic Emergency Response Guidelines*. The guidelines were released in May 2007. Please note that these guidelines are designed to complement the standards of the BC Health, Safety and Reclamation Code for Mines in British Columbia. The guidelines are not exhaustive and may require adaptation for use in other jurisdictions.

Introduction:

In developing an Emergency Response Plan for your operation in accordance with the *Health, Safety and Reclamation Code for Mines in British Columbia* (HSRC) some basic factors must be considered. This guide, although not all-inclusive, is designed to assist the Mine Manager or person in charge of the exploration site in developing a workable plan for an operation. Although operations may be similar, each operation is unique, and may have a different plan in place to accommodate the site, the type of operation, the personnel, the level of training available, transportation, climate, and equipment available on site.

The plan once completed must be filed with the Chief Inspector as per the *Health, Safety and Reclamation Code*.

Components of the Plan:

I: Mine/Operation Information:

The following list identifies basic information that should be in the plan as it applies to a mining operation:

Note: A Mine is a place as defined under the Mines Act R.S.B.C. c 1996 (updated to July 16, 2002). Sites where mechanical disturbance of ground and/or exploration drilling occur and any place defined as a mine by the Chief Inspector are included in this definition.

- Name of the Mine and the company with a mailing address and contact telephone numbers (fax and e-mail if applicable)
- Name of the Mine Manager as appointed under the Mines Act
- Mine number and permit number
- Type of operation, i.e. underground, surface, quarry, exploration, sand and gravel, placer
- Location of the property (UTM or Latitude/Longitude)
- Number of employees on site, including management and contractors

- Accurate mine plans showing and identifying areas should be maintained on site and made available to responding teams, personnel, or agencies

II: Hazard Analysis of Operation:

This section should identify all potential emergencies that could occur on the site. These emergencies may be broadly broken into five basic types. Each operation may choose to include more detail; others may break the five types into fewer or more than five types.

1. Fire/Explosion
2. Injury to workers
3. Environmental
4. Climate
5. Equipment failure

III: Emergency Equipment

In this section, list the emergency equipment available on site to deal with identified potential emergencies/hazard. Also include other sources of equipment that may be necessary. Some examples are:

- Fire pumps and extinguishers
- First Aid supplies
- Forest fire fighting supplies
- Rescue equipment (e.g. stretcher that can be fitted in helicopter or vehicle)
- Equipment that can be assigned to an emergency task (e.g. a dozer or excavator used to build roads and trails can be pressed into service to dam or dyke a flood)
- Industrial ambulance or emergency transport vehicle
- Outside sources of specific equipment

IV: Trained Personnel

In this section, list the availability on site of trained personnel capable of dealing with the identified potential emergencies/hazards.

- Contact information for on site First Aid
- Identify other sources of trained personnel (i.e. back-up teams, other agencies such as local fire department, local search and rescue, and provincial ambulance)

V: Implementation of the Plan and Incident Command

Clearly define how persons involved in an emergency are to access and implement the plan: *(Preplan basic response guidelines based on hazard assessment)*

- First steps, including who to call, how to call, and when to call
- Identify who will be responsible for implementing the emergency plan.

- Identify who will be in charge of conducting the emergency operation.
- Define all communication systems to be used (i.e. two-way radio, cell phone, satellite phone).
- Assign tasks by function and how the function will be filled. Examples include:
 - call-outs and communication with other access road users including logging companies
 - arranging assistance from other agencies or operations
 - required notification (e.g. Mines Inspectors (Health and Safety), Provincial Emergency Plan personnel, etc.)
- Include an Emergency Notification and Mobilization Chart

VI: Directions to Site:

Provide clear written directions to the site; include maps that can be used for navigation. This is particularly important in remote areas. If using a radio controlled logging road, include radio frequencies and call-out procedures.

For exploration sites, marshalling points should be established. Coordinates of such points should be provided, and helicopter landings areas should be identified or established.

- Clearly define how these directions will be communicated to those who may not be familiar with the area or roads and are called in to assist.
- Identify who has been given copies of the directions in advance.
- On long road transport of injured workers, identify and mark on the map possible transfer sites for Provincial Ambulance.

VII: Contact Lists:

Set a stand alone page with all contact information for all agencies listed, in addition to Company contacts. The following is not all-inclusive.

- Mine Manager
- Corporate Head Office
- First Aid, phone, or radio channel
- Emergency personnel
- Outside agencies (Federal, Provincial, or Local Government contacts)
- Equipment suppliers
- Transport companies, including air service (float plane or helicopter)
- Back-up rescue team if applicable

VIII: Training

Include a provision for training all persons on site in the application of the plan.

IX: Records:

Supplementary to the plan are all the records associated with it. Therefore, the following records should be maintained on site.

- Training
- Equipment checks
- Implementation if applicable
- Incident debriefing if applicable

Conclusion:

This guide is not all inclusive, and must be adapted to each site according to the risk assessment. It is imperative that the Mine Manager update the plan as may be required, from time to time due to changes in personnel, equipment, mine plan changes, or locations. It is also good practice to test the emergency preparedness plan with all affected persons. In some cases, evacuation drills are required, and **if the site requires the evacuation drill, the evacuation procedure must be posted and communicated to all affected personnel.**

References:

Mines Act. http://www.qp.gov.bc.ca/statreg/stat/M/96293_01.htm

Health, Safety and Reclamation Code for Mines in British Columbia.

<http://www.em.gov.bc.ca/Subwebs/mining/Healsafe/mxready/mxcode01.htm>

Canadian Mineral Exploration Health & Safety Awards

AME BC began its Safety Awards program in 1983 to recognize the commitment of mineral exploration companies to health and safety.

The **Annual Safety Award** was originally awarded to the company judged to have the most outstanding safety record year following a minimum of 10,000 person hours in mineral exploration activity in British Columbia and Yukon in the preceding year without a lost workday accident.

Between 1983 and 2005, AME BC awarded 408 **Exploration Safety Award** diplomas and 634 decals for repeat winners to companies who operated without a lost workday accident throughout the preceding year in British Columbia and Yukon. The record year was 1989, in which 69 companies received awards, including 30 repeat winners.

For the year 2005, the Annual Safety Award and Exploration Safety Award were expanded nationwide with the cooperation of PDAC. The winner of the 2005 Annual Safety Award was FNX Mining Company Inc., which logged 305,330 hours without a lost workday accident, and 71 companies were awarded with Exploration Safety Awards of operating without a lost workday accident.

In 2005, the AME BC Health & Safety Committee initiated the **David Barr Award in recognition of Excellence in Leadership and Innovation in Mineral Exploration Health and Safety**. Imperial Metals Corporation was the first recipient. Imperial Metals had also reported the largest number of lost workday accident free hours in British Columbia in 2005, and had previously won two Five-Year Safety Awards in 1992 and 2002.

2006 Recipients

The winner of the 2006 Annual Safety Award is De Beers Canada Inc., which reported 257,235 lost workday accident-free hours.

The organizations with the highest numbers of lost-workday-free hours in 2006 are as follows.

De Beers Canada Inc.	257,235
FNX Mining Co.	187,822
IAMGOLD Corporation	86,208
Stratco Resources Inc.	49,000

Exploration Safety Awards are awarded to 61 companies for operating without a lost workday accident throughout the year, down from 71 in 2005. AME BC and PDAC congratulate the winners.

The 2006 Award Recipients are as follows:

Agnico-Eagle Mines Limited	Green Valley Mine Incorporated
Alexandria Minerals Corporation	IAMGOLD Corporation
Amarc Resources Ltd.	International Bethlehem Mining Corp. (formerly
Arbutus Resources Ltd.	Orphan Boy Resources Inc.) (2)
Auramex Resource Corp. (2)	Kennecott Canada Exploration Inc.
Aurum Geological Consultants	LabMag GP Services Inc.
Avalon Ventures Ltd	Lakewood Mining Co. Ltd.
Azimut Exploration Inc. (2)	Liberty Mines Inc.
Barrick Gold Corporation (2)	Menika Mining Ltd.
BHP Billiton	Merrex Gold Inc.
Bootleg Exploration Inc. (2)	North American Palladium Ltd.
Breakwater Resources Ltd.	Northgate Minerals Corporation
British Columbia Geological Survey	Pacific Booker Minerals Inc. (2)
Cariboo Rose Resources Ltd.	PBG Geoscience
Columbia Yukon Explorations Inc.	Paul Reynolds, P.Geo.
DeBeers Canada Inc. (Annual Safety Award Winner)	Rimfire Minerals Corporation (2)
Eastfield Resources Ltd. (2)	Sabina Silver Corporation
Emerald Fields Resources Corp.	Sage Gold Inc. (2)
Finlay Minerals Ltd.	Seel Enterprises Ltd.
FNX Mining Company Inc. (2)	SLAM Exploration Ltd. (2)
Geological Survey, Newfoundland and Labrador	St Andrew Goldfields Ltd.
Department of Natural Resources	Starlynx Communications
Globex Mining Enterprises Inc.	Stratco Resources Inc.
Gossan Resources Limited (2)	Taseko Mines Limited
Great Western Minerals Group Ltd.	Temex Resources Corp.

Terrane Metals Corp.
Thundermin Resources Inc.
Tri Origin Exploration Ltd.
TTM Resources Inc.
Venturex Exploration Ltd.
Vismand Exploration Inc. (2)
Waseco Resources Inc. (2)
Watts, Griffis and McOuat
West Timmins Mining Inc.
Western Copper Corporation
Western Keltic Mines Inc. (2)
Western Troy Capital Resources Inc. (2)
Wildrose Resources Ltd. (2)

(2) represents 2 years without a lost workday accident.

The following companies have operated lost workday accident-free in British Columbia and Yukon for at least three years:

International Bethlehem Mining Corp. (3 years)
Pacific Booker Minerals Inc. (5 years)
Rimfire Minerals Corporation (3 years)
Western Keltic Mines Inc. (3 years)

Canadian Mineral Exploration Health & Safety Survey – available online at www.amebc-pdac-healthandsafety.ca

1



Canadian Mineral Exploration Health & Safety Survey 2006

In completing this form please note the following:

- The form should be completed by junior companies, major companies, government geological surveys, diamond drilling contractors, geophysical contractors, and any other companies or contractors carrying out exploration related activities in Canada.
- We ask companies to submit in the spaces below a close estimate of the number of person days worked in 2006 by:

a) "Company personnel" which includes employees and line-cutting, geophysical, geochemical, trenching etc. contractors
and

b) "Contractors engaged in drilling and underground work" for exploration and development. Please indicate the names of diamond drilling and underground contractors so that we do not duplicate information.

- Complete all the required fields, (*) indicates required fields
- If you have any questions about the form please contact Jonathan Buchanan at 604-689-5271 ext 225.
- All information will be kept confidential, and Personal Information Protection and Electronic Documents Act mandates will be maintained.

Name of Person & Company Responsible for Safety (*Required Fields)

*Name:		
*Title:		
*Company Name:		
E-mail:		
<u>Address Information</u>		
Phone:		
*Street Address:		
Street Address 2:		
*City:		
*Province/Territory:		Postal Code:
<u>Additional required information</u>		
*Does your organization have a Health and Safety Program: Yes___ No___		
*Reporting Period:	2006	

Please complete and return by fax to Jonathan Buchanan, AME BC at 604-681-2363 or by mail to AME BC, Suite 800, 889 West Pender Street, Vancouver BC V6C 3B2

Canadian Mineral Exploration Health & Safety Survey – available online at www.amebc-pdac-healthandsafety.ca

2

Company:									
Name of Drilling / Underground Contractors:									
For companies and contractors working in different areas in Canada please provide Person - Days worked in each province or territory									
*Worksite Location 1:	<table> <tr> <td>Prov./Terr.</td> <td>Company Person- Days Worked</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>Contractor Person- Days Worked</td> </tr> <tr> <td></td> <td>_____</td> </tr> </table>	Prov./Terr.	Company Person- Days Worked	_____	_____		Contractor Person- Days Worked		_____
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*Worksite Location 2:	<table> <tr> <td>Prov./Terr.</td> <td>Company Person- Days Worked</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>Contractor Person- Days Worked</td> </tr> <tr> <td></td> <td>_____</td> </tr> </table>	Prov./Terr.	Company Person- Days Worked	_____	_____		Contractor Person- Days Worked		_____
Prov./Terr.	Company Person- Days Worked								
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	Contractor Person- Days Worked								

*Worksite Location 3:	<table> <tr> <td>Prov./Terr.</td> <td>Company Person- Days Worked</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>Contractor Person- Days Worked</td> </tr> <tr> <td></td> <td>_____</td> </tr> </table>	Prov./Terr.	Company Person- Days Worked	_____	_____		Contractor Person- Days Worked		_____
Prov./Terr.	Company Person- Days Worked								
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	Contractor Person- Days Worked								

*Worksite Location 4:	<table> <tr> <td>Prov./Terr.</td> <td>Company Person- Days Worked</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>Contractor Person- Days Worked</td> </tr> <tr> <td></td> <td>_____</td> </tr> </table>	Prov./Terr.	Company Person- Days Worked	_____	_____		Contractor Person- Days Worked		_____
Prov./Terr.	Company Person- Days Worked								
_____	_____								
	Contractor Person- Days Worked								

If additional space is required attach additional copies

Did you experience any accidents, incident and/or near misses?

***Yes__ No__**

***If YES, please complete the following form.**

Please complete and return by fax to Jonathan Buchanan, AME BC at 604-681-2363 or by mail to AME BC, Suite 800, 889 West Pender Street, Vancouver BC V6C 3B2

[illegible]

Occupation:	Type:	Nature of Injury:	Cause of Injury:	9-Camp Equipment
1-Driller	1-NM (near miss)	1-Sprain	10-Pre-existing Illness/Seizure	Related
2-Driller Helper	2-FA (first aid)	2-Cut	11-Back Injury	10-Weather
3-Miner	3-MA (medical aid)	3-Skeletal Injury	12-Fatality	11-Chemicals
4-Geologist		4-Bruise/Muscular Injury	13-Other	12-Other
5-Field Assistant		5-Allergies	14-None	
6-Geophysicist		6-Substance Abuse		
7-Line Cutter		7-Frostbite		
8-Surveyor		8-Eye Injury		
9-Cook		9-Chemical or Burn/Scald		
10-Other				
			6-Improper Lifting	
			7-Falling Objects	
			8-Drilling Machinery Related	

Date: _____, 2007

Signature: _____

Please complete and return by fax to Jonathan Buchanan, AME BC at 604-681-2363 or by mail to AME BC, Suite 800, 889 West Pender Street, Vancouver BC V6C 3B2



Annual Report 2006

Canadian Mineral Exploration Health & Safety



Association for Mineral Exploration British Columbia

800-889 West Pender Street
Vancouver, BC V6C 3V2
T. 604.689.5271 F. 604.681.2363
www.amebc.ca
info@amebc.ca



9th Floor, 34 King Street East
Toronto, Ontario M5C 2X8
T. 416.362.1969 F. 416.362.0101
www.pdac.ca
info@pdac.ca

Cover Photo:

De Beers Canada team performs an early exploration program on Baffin Island, Nunavut