2022/2023 EDITION

ANNUAL H&S SURVEY INCIDENT DATA & CODE CATALOGUE

PREPARED FOR

CROSH; ASSOCIATION FOR MINERAL EXPLORATION; PROSPECTORS & DEVELOPERS ASSOCIATION OF CANADA

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THE OBJECTIVE

To provide an updated & streamlined version of coding classifications to be used in the health and safety survey moving forward. An updated code catalogue will promote consistency when monitoring injuries over time and across data sources. This catalogue will reduce biases and limitations within the survey, as well as enhance validity of the report. The outcomes of such a catalogue will facilitate easier data analysis by limiting user error. The outcome is to provide code classifications that are specific to maximize the outcomes of the report.

THE CATALOGUE

This catalogue is the first of its kind; an industry specific classification system that is research based and backed by reliable, real world applications of similar incident reporting systems.

The following catalogue will showcase some suggestions on how to categorize and present incident data.

RESEARCH BASED & FIELD SUPPORTED APPLICATIONS

THE RICH INFORMATION ACQUIRED FROM INCIDENT AND NEAR MISS REPORTING HAS BEEN STUDIED WITHIN VARIOUS INDUSTRIES AND ORGANIZATIONS. SUCH FORUMS HAVE USED STATISTICS ACQUIRED FROM PAST INCIDENT REPORTS TO REVEAL TRENDS TO IMPROVE OCCUPATIONAL HEALTH AND SAFETY.

EXTENSIVE HEALTH & SAFETY RESEARCH HAS YET TO BE CONDUCTED IN THE MINERAL EXPLORATION FIELD. THEREFORE, UTILIZING RESOURCES FROM ORGANIZATIONS THAT HAVE A SIMILAR AND WELL SUPPORTED INCIDENT REPORTING SYSTEM IS KEY.

THIS SECTION WILL EXPLAIN THE THREE MAIN ORGANIZATIONS THAT HAVE INFLUENCED THE CODES WITHIN THIS CATALOGUE

01

THE INTERNATIONAL CLASSIFICATION OF DISEASES (ICD)

02

WORKERS COMPENSATION BOARD/COMMISSIONS (WCB)

03

NATIONAL OUTDOOR LEADERSHIP SCHOOL (NOLS)

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THE INTERNATIONAL CLASSIFICATION OF DISEASES (ICD)

The ICD is an international standard for reporting clinical diagnoses developed by the World Health Organization (WHO).

The ICD codes originated from the International Statistical Classification of Diseases and Related Health Problems as a standardized method of recording and tracking diseases and injuries.

The ICD is the most cumbersome classification system, with over 68,000 codes with the purpose of diagnostic coding.

Code assignments have been created to cover virtually any injury or disease sustained that has been presented in a clinical setting. Appropriate codes have been selected by the writer for the purpose of this catalogue.

WORKERS COMPENSATION BOARD/COMMISSIONS (WCB)

WCB is the leading board to provide liability insurance coverage for workplaces across the Country. Through WCB's, employers have access to industry specific health and safety information.

With this, detailed classifications are provided to ensure injuries and near misses are properly counted for. Injury event, injury source, and nature of injury are the three main details that need to be accounted for. This information is tri-fold as these categories offer extensive information regarding each incident.

Each province refers to its own WCB; all provinces have been examined for the purpose of this report. Together, the WCB from all provinces and territories covers a diverse range of industries: Health care & social services, construction, transportation & warehousing, manufacturing and retail trade are amongst the top five industries. Taking all WCB's across the country into account, the list of injuries and events is extensive.

Workers' Compensation Board

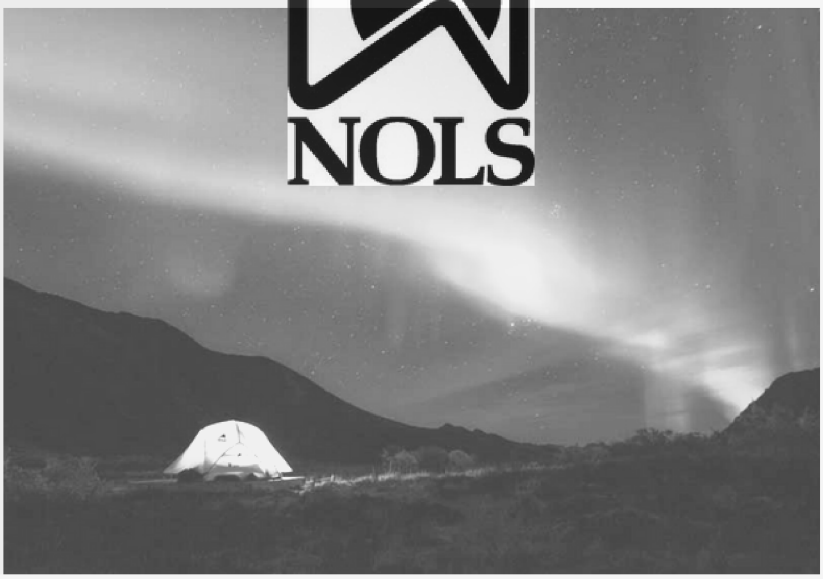
NATIONAL OUTDOOR LEADERSHIP SCHOOL (NOLS)

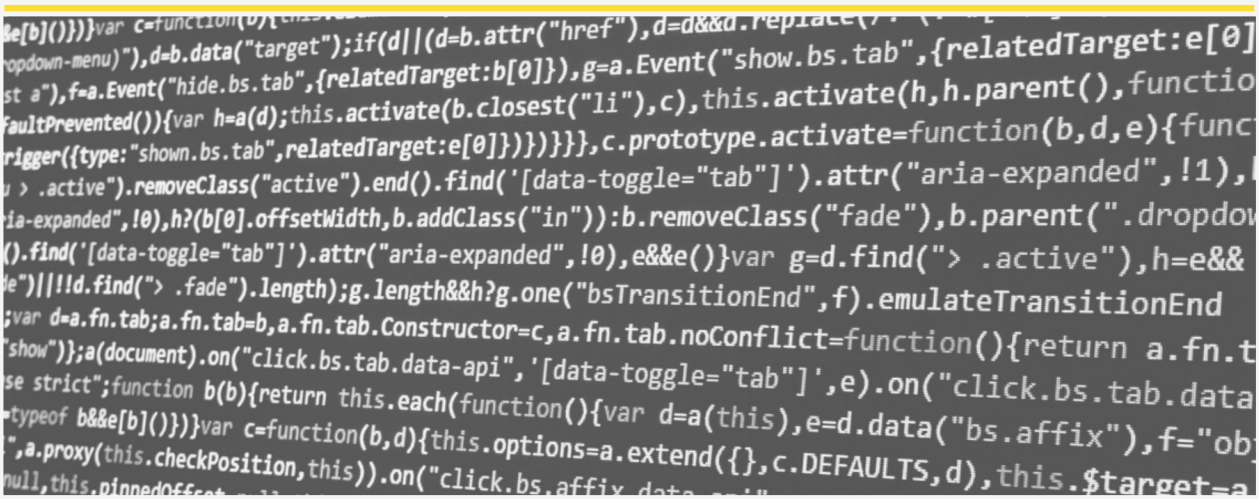
For the purpose of this catalogue, the ICD and WCB code classifications have been enhanced by field-studied applications developed through NOLS.

The incorporation of the NOLS classification systems is due to the fact mineral exploration has unique injury reports as a result of the multi-dimensional working environment.

Therefore, incorporating a field of study that has similar incidents will prove to be beneficial. This will allow the current survey report to include codes that are related to outdoor incidents that have been applied and studied for over 50 years.

Components from the NOLS incident data field copy will be taken into consideration, and adapted for relevance with mineral exploration.





PART 1 OF CATALOGUE

THIS NEXT SECTION WILL PROVIDE AN OVERVIEW OF WHAT THE CODE CLASSIFICATIONS WILL LOOK LIKE.

THERE ARE FOUR MAIN COMPONENTS TO THIS CATALOGUE, WHICH FOLLOW A CHRONOLOGICAL ORDER FROM BROAD TO SPECIFICS, IN TERMS OF THE EVENT.

CLASSIFICATIONS

01
CLASSIFICATION

02
INCIDENT TYPE

03
NATURE OF ILLNESS, INJURY & NON-MEDICAL

04
ANATOMICAL LOCATION

INCIDENT REPORTING SCHEME

THIS SECTION DEMONSTRATES THE HIERARCHY WHICH WILL EVALUATE THE CLASSIFICATIONS OF THE CATALOGUE

Nature of Illness & Injury

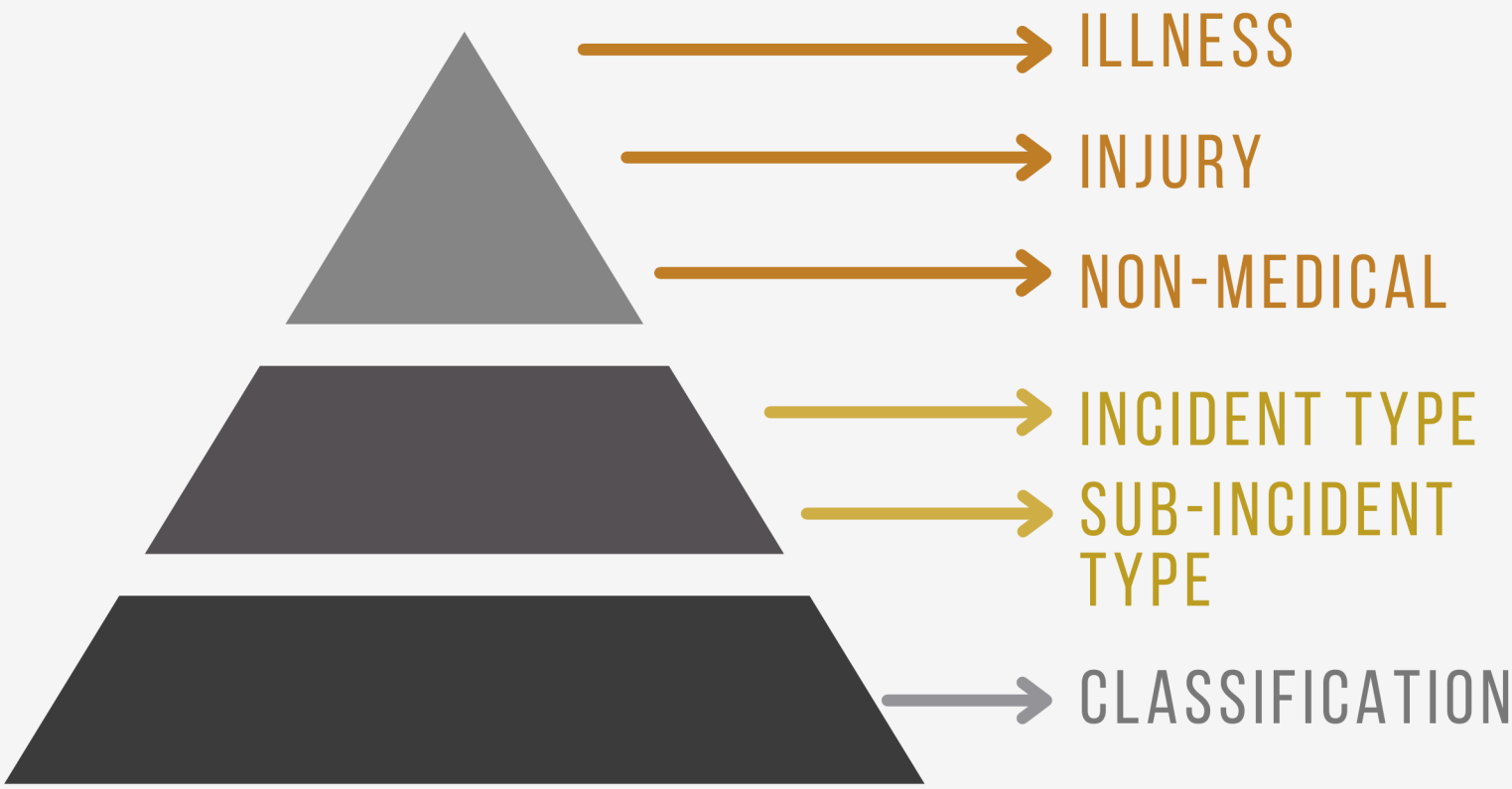
Incident Type

Classification

This represents the three tiers of injury and event categorizing. The base of the pyramid represents the broad grouping of incident, next the type of incident, up to the specific nature of the injury / illness.

INCIDENT REPORTING SCHEME

FOR VISUAL REFERENCE, THIS SECTION BREAKS DOWN THE HIERARCHY OF THE CLASSIFICATIONS.



CLASSIFICATION

The classification refers to the incident class in which an injury or near miss was sustained. These are the broad, overarching categories that represent the first component of analyzing an event.

These classifications fall under the idea of the injury severity matrix, by chronologically ordering injuries from most severe to less severe (lost time injuries/serious, minor injuries/reportable/first aid, near misses and unsafe acts). Other applicable components have also been added.

The classifications have been simplified from the original survey report.

The classifications have been ordered from least severe to most severe.

- Near Miss / Near Hit
- Illness
- First Aid
- Medical Aid
- Non-Medical
- Restricted Work
- Lost Time
- Property Damage
- Environmental
- Fatality

CLASSIFICATION QUALIFIERS

Near Miss / Near Hit	**A event that has the potential to cause, but does not actually result in an incident**
Illness	**A sickness affecting the body or mind**
First Aid	**A minor incident requiring immediate attention at the location of injury. Aid may either be self-administered or provided by another person (not medical professional)**
Medical Aid	**Medical treatment administered by a medical professional (e.g. nurse or doctor)**
Non-Medical	**An incident that does not require medical attention or first aid (see p. 15 for details)**
Restricted Work	**Modified work duties as a result of a work-related injury**
Lost Time	**A work-related injury that results in the individual being off work past the day of the incident**
Property Damage	**Damage done to tangible property**
Environmental	**Any damage or degradation sustained to the air, water, or land surrounding working environment**
Fatality	**The occurrence of death as a result of an incident**

INCIDENT TYPE

The incident types have been broken down into two parts: incident type and sub-incident type.

The incident type is the second category within the overall incident reporting scheme and refers to the mechanism of injury.

These mechanisms of injury are the general action or event that best describes the circumstances that resulted in the injury or near miss.

Airplane	Helicopter
Animal	Improper Lifting
ATV / UTV	Improper Operation
Boat	Light Vehicle
Camp Equipment Related	Medical Condition
Chemicals	Preventable with PPE
Drill Machinery Realted	Repetitive Activity
Environmental Conditions	Slip / Fall
Falling Objects	Snowmobile
Field Work	Tool Use
Harassment	Water Related
Heavy Equipment	Other

SUB-INCIDENT TYPE

This section refers to the secondary factors present within an injury or event. A sub-incident will not be relevant for every documented event. Recording the sub-incident will help clarify the main contributing factors and the secondary factors, and enhance data analysis by narrowing down the main factors involved within an event. This will also limit confusion and user error when selecting appropriate entries while filling out the report.

Adding the sub-incident will place emphasis on the specific factor, rather than classifying events broadly,

Airplane	Helicopter
Animal	Improper Lifting
ATV / UTV	Improper Operation
Boat	Light Vehicle
Camp Equipment Related	Medical Condition
Chemicals	Other
Drill Machinery Realted	Preventable with PPE
Environmental Conditions	Repetitive Activity
Falling Objects	Slip / Fall
Field Work	Snowmobile
Harassment	Tool Use
Heavy Equipment	Water Related

OLD VS UPDATED INCIDENT TYPE

EXAMPLE 1: A WORKER FELL ON ICY CONDITIONS AND BROKE LEG.

OLD REPORT	NEW REPORT
INCIDENT TYPE = SLIP/FALL	INCIDENT TYPE = SLIP/FALL SUB-INCIDENT = ENVIRONMENTAL CONDITIONS

EXAMPLE 2: WORKERS SUSTAINED HYPOTHERMIA AFTER HELICOPTER EMERGENCY LANDED INTO BODY OF WATER.

OLD REPORT	NEW REPORT
INCIDENT TYPE = HELICOPTER	INCIDENT TYPE = WATER RELATED SUB-INCIDENT = HELICOPTER

NATURE OF: INJURY & ILLNESS

The nature of injury & illness are the most specific categories within incident reporting schemes.

These are the primary physical/psychological characteristics. The nature of illness refers to a sickness affecting the body or mind, whereas the nature of injury refers to physical damage done to the body.

Nature of Illness
Allergic Reaction
Cardiac
Dehydration
Heat Realted
Hypothermia
Mental Health
Other
Pre-existing Condition
Respiratory
Tick Fever
Virus

Nature of Injury	
Anaphylaxis	Fatality
Bleeding	Fracture
Blister	Frostbite
Bruise	Infection
Burn	Muscular
Chemical	Overexertion
Cut	Sprain
Dental	Strain
Electric Shock	Tendonitis

NATURE OF: NON-MEDICAL

Non-medical classification are two fold; events that occur that do not require any medical attention, or events that damage the body or mind external to the working environment.

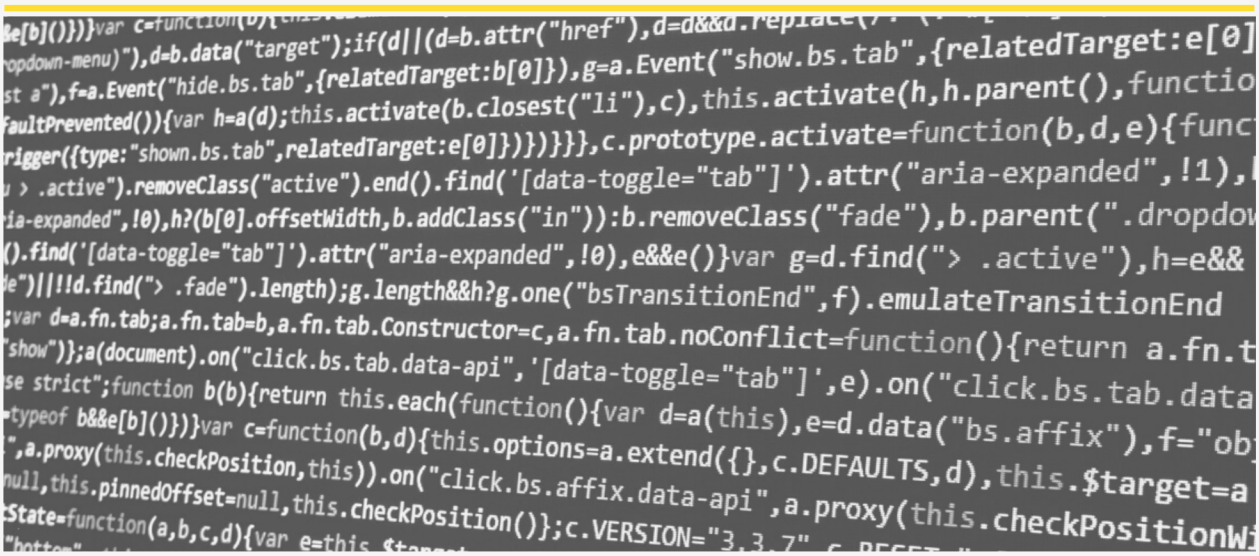
Examples of non-medical situations could be abuse of alcohol or drugs, a physical fitness limitation, verbal or physical abuse, or a soft tissue injury that was sustained where no medical attention was required.

Nature of Non-Medical
Behavioural
Fitness - Mental
Fitness - Physical
Substance Abuse

ANATOMICAL LOCATION

Anatomical location refers to any region or part of the body that the injury was sustained or involved in a near-miss incident.

Anatomical Location	
Abdomen	Knee
Ankle	Lower Back
Buttock	Lower Leg
Chest	Mouth
Ear	Neck
Elbow	Other
Eye	Pelvis
Face	Shoulder
Finger(s)	Thigh
Foot	Toe(s)
Forearm	Upper Arm
Hand	Upper Back
Head	Wrist
Hip	N/A



PART 2 OF CATALOGUE

THIS NEXT SECTION WILL PROVIDE AN OVERVIEW OF THE COMPONENTS WITHIN THE CATALOGUE THAT ENHANCE THE INFORMATION PERTAINING TO EACH EVENT.

THERE ARE FOUR MAIN COMPONENTS TO THIS SECTION WHICH HELP TO COLLECT AS MUCH INFORMATION ABOUT THE INCIDENT AS POSSIBLE.

COMPONENTS

01
CONTRIBUTORY FACTORS

02
LOCATION

03
ACTIVITY

04
OCCUPATIONS

05
EMPLOYMENT STATUS

06
EXISTING CODES

CONTRIBUTORY FACTORS

Contributory factors within injury and incident causation are one element within the situation that caused the incident to occur.

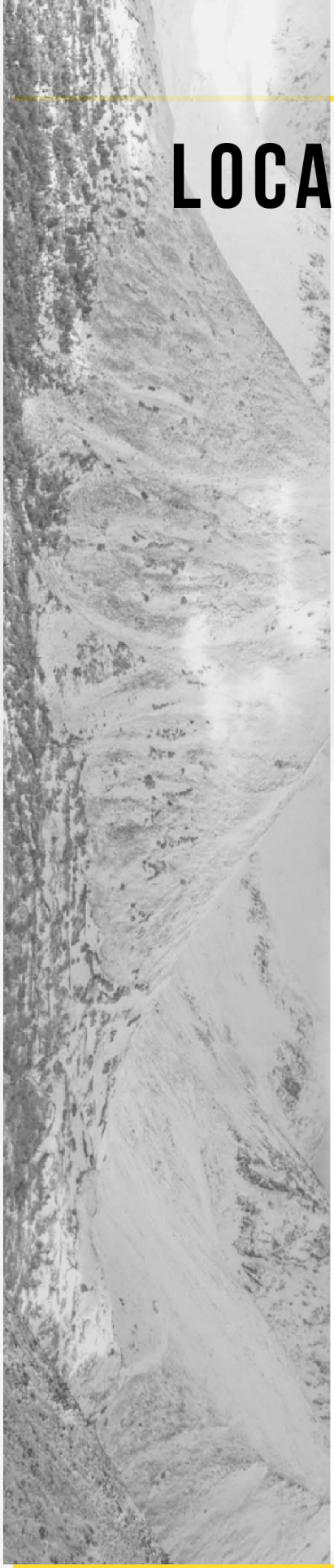
Organizational: elements that influence how the organization, and everybody within it behave: safety culture, supervision, workload

Personnel: individual psychology and physiology; motivation, fatigue, stress & deviation of protocols

Task: components that influence how tasks are performed; workload, teamwork, job hazard assessment

Workplace: physical working environment; sub-standard environment & equipment

Contributory Factors
Organizational Factor
Personnel Factor
Task Factor
Workplace Factor



LOCATION

The location has been edited from the original survey report to provide a more streamlined approach. The original reporting system allowed users to manually enter in the location of the event. This added confusion, increased errors and made data cleaning more involved. The intent of the location was not specified and was left to the discretion of the user.

Moving forward, location will not refer to city, town or street name, but will refer to the geographical location or site in which the mineral exploration activities were carried out.

Location	
Core Logging Facility	Laydown / Laydown Storage
Core Sample Preparation	Line or Trail Cutting
Drill Machine	Mine - Open Pit / Quarry
Drill Pump and/or Shack	Mine - Underground
Drill Site (Outside Drill Machine)	Off Project Site
Exploration Warehouse	Office
Field Camp	Parking Lot
Field Camp - Dining Facility	Shop - Maintenance / Repair Facility
Field Camp - Field Office	Shop Yard
Field Camp - Kitchen	Staging / Mob / Demob
Field Work	Trail - Off Road
Flying - Airport / Airstrip	Trail
Flying - Fixed Wing	Travel on Highway
Flying - Helicopter	Travel on Site Access Road
Flying - Helicopter Landing Site/Pad	

ACTIVITY

BELOW ARE THE OPTIONS USERS CAN SELECT WHEN CATEGORIZING THE ACTIVITY THAT WAS INVOLVED WHEN THE INJURY OR NEAR MISS WAS SUSTAINED. THESE SELECTIONS ARE ALL ENCOMPASSING AND FAIRLY BROAD, AND AS SUCH, USERS SHOULD MATCH ACTIVITY AS CLOSE AS POSSIBLE TO THE OPTIONS PROVIDED.

Activity	
Core Logging	Mine - Surface
Core Sample Preparation	Mine - Underground
Drilling Related	Field Office Related
Field Camp Related	Storage
Field Work / Traversing	Training
Geophysics Surveying	Travel - Business
Infrastructure Construction	Travel - Transportation

OCCUPATION

After closely analysing 34 years of accident data, changes have been made to address the dynamic working environment within the mineral exploration field. Adding more options for users to select will enhance the validity of the report through selection of the most specific and accurate job titles. Although sufficient, the previous survey report was broad and lacked specifics in terms of occupations. This in turn could result in users selecting occupational titles that 'accurately depict' the job title rather than 'best suited'.

Existing Occupations

COOK
DRILL - NOT SPECIFIC
DRILLER
DRILLER HELPER
FIELD ASSISTANT
GEOLOGIST
GEOLOGICAL TECHNICIAN
GEOPHYSICIST
HEAVY EQUIPMENT OPERATOR
LABOURER
LINE CUTTER
MINER
OTHER

Added Occupations

AUDITOR
BIOLOGIST
CAMP MANAGER
CAMP WORKER
ENGINEER
FIELD WORKER - NOT SPECIFIC
MEDIC
MOTOR VEHICLE OPERATOR
PILOT
TECHNICIAN

EMPLOYMENT STATUS

CONTRACTOR

Employees of contracting companies

EMPLOYEE

Employees of the Jr/Sr mining companies

VISITOR

Short stay site visitors such as the mine inspector

EXISTING CODES

THESE CODES HAVE NOT BEEN ALTERED FROM THE ORIGINAL SURVEY REPORT.

CODES

01

PROVINCE / TERRITORY

02

GENDER

03

DAY VS NIGHT

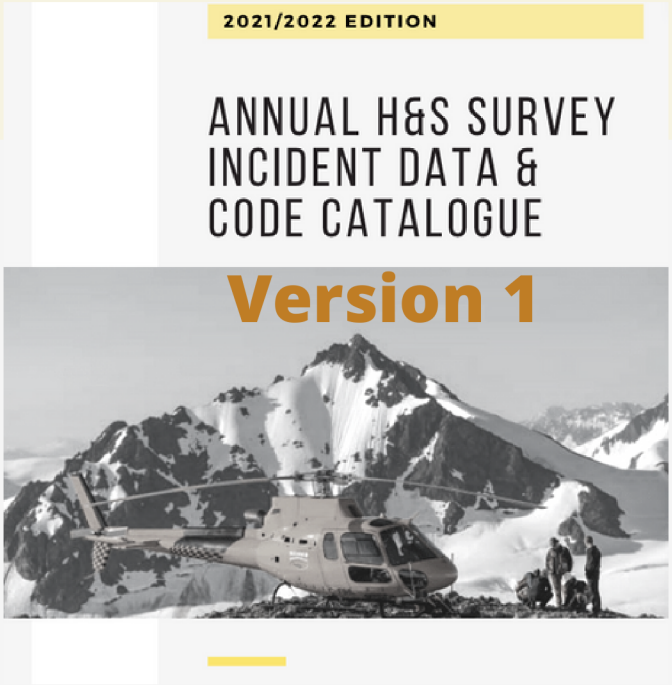
HOW TO USE

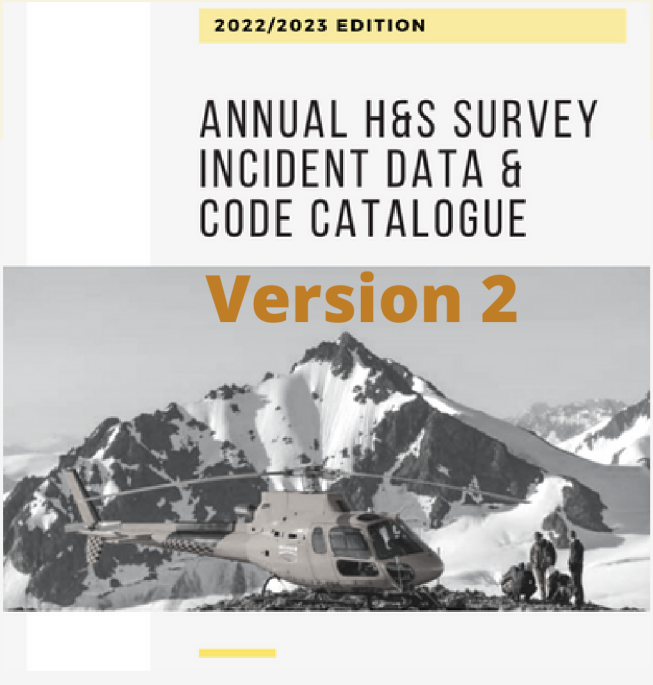
Individuals filling out the survey report will have the option to select any of the codes previously outlined within this catalogue. As requested, drop down boxes will be locked to limit user error and the possibility of overriding options.

This catalogue should be provided to all industry partners and workplaces that participate in the annual survey report.

This code catalogue can be used in administrative situations to provide clarification on specific codes, will help with data analysis, and should be provided to all individuals overseeing company health and safety reports.

This catalogue can be altered to create updated versions to best suit the evolving needs of the industry.





THE INPUT AND SPONSORSHIP FROM INDUSTRY PARTNERS IS GREATLY APPRECIATED AND TRULY VALUED.

CROSH CRSST
centre for research in occupational safety and health at Laurentian University | centre de recherche sur la santé et sécurité au travail à l'Université Laurentienne

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PROSPECTORS & DEVELOPERS ASSOCIATION OF CANADA

AME Association for Mineral Exploration

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MAJOR Drilling

AngloAmerican

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