



# ENVIRONMENTAL, HEALTH AND SAFETY

Safety Programs | Safety Innovations | Sustainable Solutions

 **BOART LONGYEAR™**





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| ONE SOURCE™

DRILLING SERVICES | DRILLING EQUIPMENT | PERFORMANCE TOOLING

*for Mining and Drilling Companies Globally*

# ABOUT BOART LONGYEAR

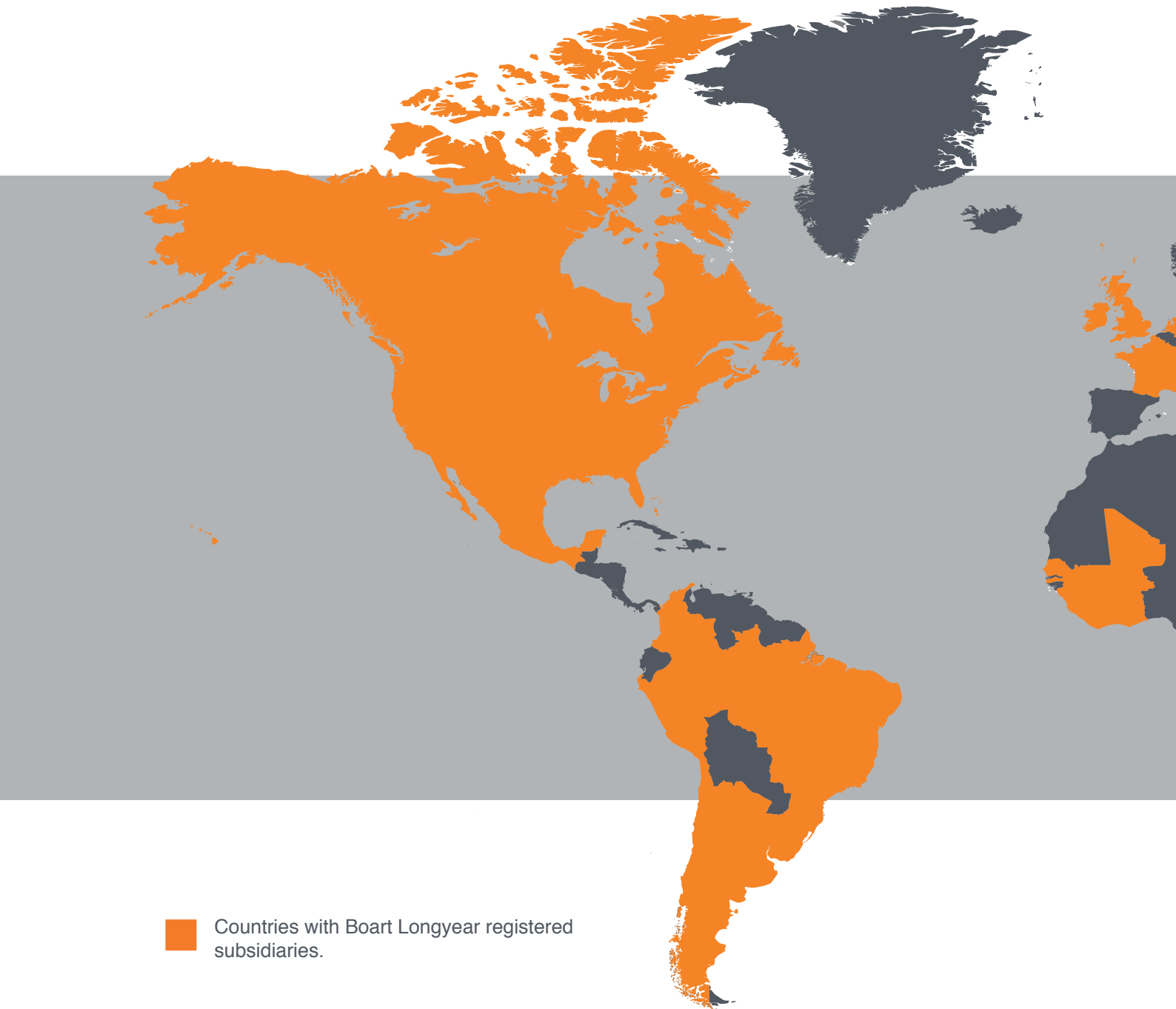
With over 120 years of expertise, Boart Longyear is the world's leading provider of drilling services, drilling equipment, and performance tooling for mining and drilling companies globally. It also has a substantial presence in aftermarket parts and service, energy, mine de-watering, oil sands exploration, and production drilling.

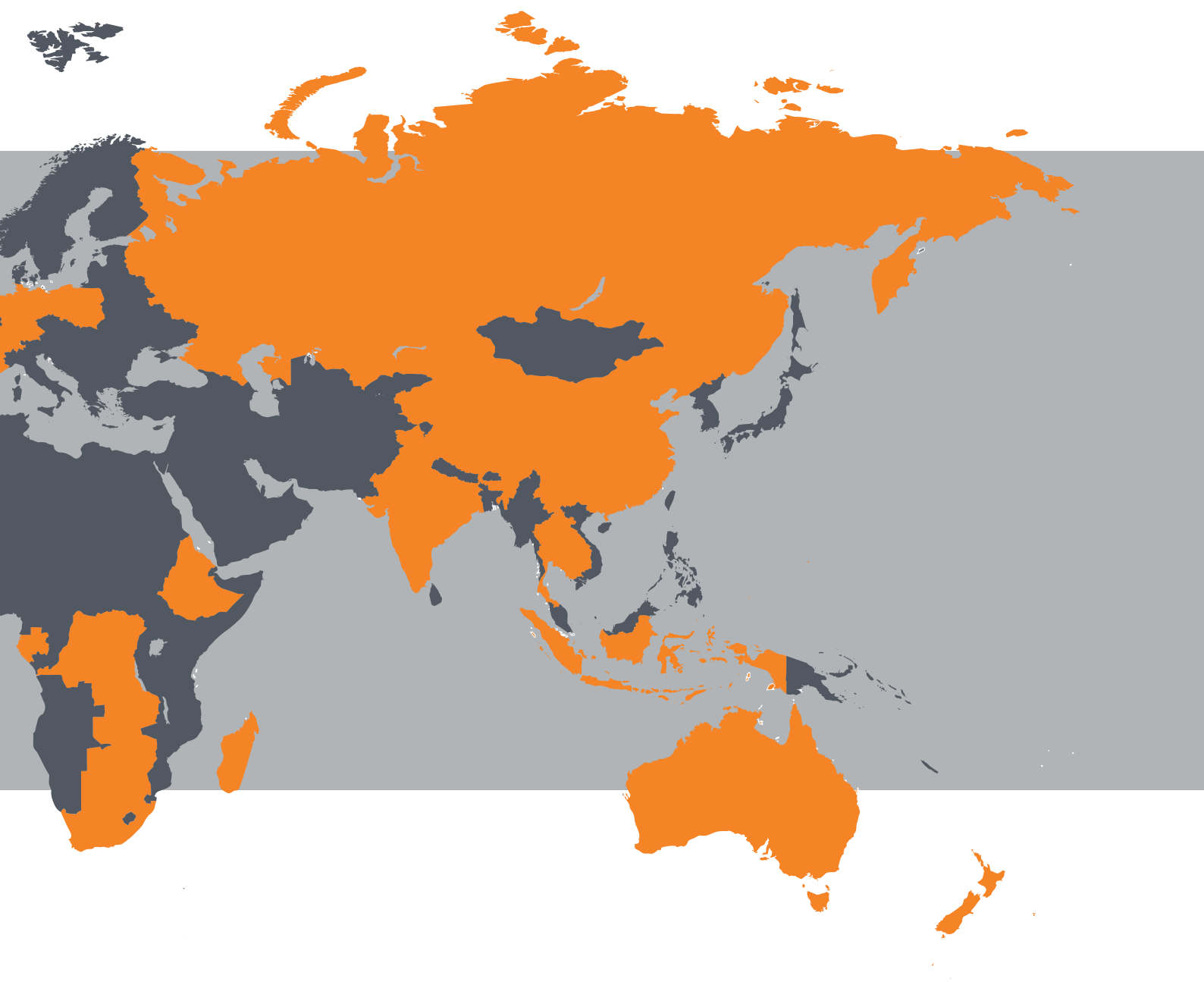
The Global Drilling Services division operates in over 40 countries for a diverse mining customer base spanning a wide range of commodities, including copper, gold, nickel, zinc, uranium, and other metals and minerals. The Global Products division designs, manufactures, and sells drilling equipment, performance tooling, and aftermarket parts and services to customers in over 100 countries.

Boart Longyear is headquartered in Salt Lake City, Utah, USA, and listed on the Australian Securities Exchange in Sydney, Australia.



# OUR GLOBAL OPERATIONS





\* Registered subsidiaries as of July 2012.





# EHS OVERVIEW

Boart Longyear's key safety programs, safety innovations and sustainable solutions incorporate EHS standards and processes in all of our global operations. These elements define our approach to Environmental, Health and Safety. It's just one way Boart Longyear provides better value for your drilling project.

# EHS POLICY

This Environmental, Health and Safety policy applies to, and governs the conduct of, all employees, officers and directors of the Boart Longyear group of companies.

Boart Longyear commits to protecting the health and safety of our employees, contractors and visitors at all of our sites and facilities. We also commit to protect the environment and the communities in which we operate. Our goal is to maintain a world class Environmental, Health and Safety (EHS) program that delivers excellence in EHS performance and drives continuous improvement.

To sustain EHS excellence Boart Longyear will:

- Comply with, or exceed, all applicable EHS laws, regulations, company policies and industry standards
- Utilize and maintain standards, procedures, controls and management systems to ensure that injury prevention, prevention of pollution and sustainable development practices are incorporated into all aspects of our business.
- Properly train all employees and contractors to understand their roles and responsibilities under our EHS programs.

Employees and contractors under our control are required to:

- Do no harm to themselves, others, environment or assets
- Correctly use required safety equipment, PPE and follow Safe Work Procedures
- Comply with the “Golden Rules of Safety”
- Report all incident
- Hold our leadership accountable for the success of our EHS programs and provide the necessary resources to achieve EHS excellence
- Implement improvement plans with Key Performance Indicators that allow us to measure, track and continuously improve performance
- Conduct regular audits to determine compliance with this policy and applicable regulations
- Communicate openly with employees, clients, regulatory agencies, our communities and other stakeholders on key EHS issues
- Actively consult with, and involve, our employees in the development and implementation of our EHS programs and initiatives
- Recognize and celebrate notable achievements, milestones or behaviors that promote EHS excellence
- Review EHS technologies, industry practices and achievements to seek continual improvement and promote best practices.
- Provide regular and comprehensive reporting to the Board of Directors so that the Board can effectively monitor our EHS performance and confirm Boart Longyear’s compliance with these principles and all statutory requirements.







# SAFETY PROGRAMS



## SAFETY ABOVE ALL

Boart Longyear recognizes that safety is paramount to our employees and critical to our customers' success, but more importantly, it's the right thing to do. Our safety standards, programs, and processes enable drillers to maximize their productivity without compromising their well-being and health. We are proud of our drilling innovations and strive to exceed client expectations when it comes to safe operations.

Boart Longyear commits to protecting the health and safety of our employees, contractors, and visitors at all of our sites and facilities. We also commit to protect the environment and the communities in which we operate. Our goal is to maintain a world class Environmental, Health, and Safety (EHS) program that delivers excellence in EHS performance and drives continuous improvement.

## THINK PROGRAM

In 2011, Boart Longyear launched a world-class safety campaign aimed at increasing the safety culture with employees. The THINK program instills in staff to never make any task menial and to always "THINK" before they act.

THINK is an acronym for:

**T**AKE THE TIME

**H**AZARD RECOGNITION

**I**DENTIFY THE RISK

**N**CESSARY CONTROLS APPLIED

**K**EEP SAFETY FIRST

# THINK



# MAKE IT PERSONAL CARDS

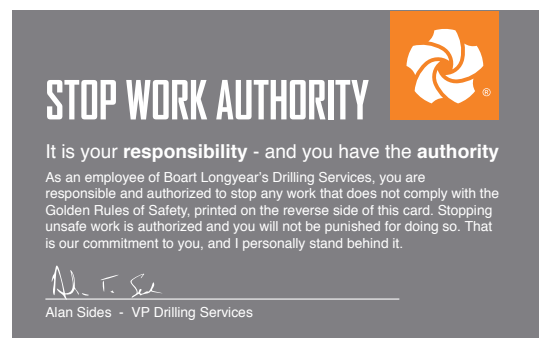
Every employee is asked to sign a Make it Personal pocket card and add a picture of why they stay safe. The inside of this folding card contains two sections; “Why I’m Working Safely Today” and “Commitment to Safety.” Both sections are signed by the employee and their supervisor. In the “Why I’m working safely today” section employees place a picture of someone or something important to them, such as their spouse, family, significant other, or possibly a personal activity. This picture should serve as a reminder of what’s most important in their life, and why they work safely.

Management interactions are an important factor in driving the importance of safety and the presentation of the card to each employee is a great opportunity for the employee and the supervisor to commit to going beyond the numbers and making safety personal.



# STOP WORK AUTHORITY

Boart Longyear employees are equipped with a “Stop Work Authority Card” that authorizes them to immediately stop any work that does not comply with safety standards. The Stop Work Authority program ensures that employees will not be punished or reprimanded for doing so.



# SAFETY

# GLOBAL EHS MANAGEMENT SYSTEM

Our EHS Management System (EHSMS) has been revised to comply and track with the elements of the ISO-14001 and OHSAS-18001 standards, the evolution and continual improvement of Boart Longyear's EHS Program, and to provide direction for the management of environmental, health and safety issues for all Boart Longyear's global operations.

The EHS Management System centers on a risk-based evaluation of business activities directed at mitigating or eliminating risk in Drilling Services, Global Supply Chain (Manufacturing), Products Group and Corporate operations within Boart Longyear. The management system is applied through the comprehensive review of business

activity risk and implementation of corporate EHS Standards in compliance with legal requirements and the Corporate EHS Policy. This document has been significantly streamlined to facilitate each business' review of applicable risk, application of a minimized yet comprehensive set of corporate EHS standards, and implementation of local controls appropriate to the business.

This EHSMS applies to all employees of Boart Longyear, as well as visitors and contractors working on Boart Longyear sites or facilities. Each Branch, Zone, Division or Plant will expand on this program to items specific in nature to that facility or operations area.

## PLANNING AND RISK ASSESSMENT

### Identification of Hazards, Assessment and Control of Risks

Boart Longyear has established a risk evaluation process incorporating an assessment tool and applicable standards with which to evaluate EHS hazards and risks. The EHS Risk Register, a record of risk evaluation, is to be completed annually for all business activities at all locations and shall include all Environmental, Health and Safety aspects of each business activity.

The risk evaluation process allows an activity to be evaluated based on its potential EHS consequences and the likelihood of occurrence or exposure. Based on that evaluation, various levels of controls shall be implemented as necessary based on the risk rating. Local management is accountable for the use of the risk evaluation process and implementation of controls. Completed Risk Registers shall be maintained and posted at local offices.

			Likelihood of Occurrence or Exposure				
			1	2	3	4	5
			Rare	Unlikely	Possible	Likely	Almost Certain
Severity of Consequences	1	Insignificant	1	2	4	7	11
	2	Minor	3	5	8	12	16
	3	Moderate	6	9	13	17	20
	4	Major	10	14	18	21	23
	5	Catastrophic	15	19	22	24	25

Score	Risk Rating	Action
1 - 5	Low	Warn supervisor and crews. Continue to monitor and control.
6 - 10	Moderate	Follow procedures and employ engineering and operational controls as necessary.
11 - 19	Significant	Stop work as needed. Mandatory use of engineering and operational controls
20 - 25	EXTREME	Stop work. Proceed only with Zone Manager approval, strict operational and engineering controls. Government or internal EHS permit may be required.

# GLOBAL CERTIFICATIONS

- ALL DRILLING SERVICES AND MANUFACTURING FACILITIES
- ALL DRILLING SERVICES FIELD ACTIVITIES





# GLOBAL EHS INFORMATION MANAGEMENT SYSTEM

The ability to monitor, trend and evaluate all Environmental, Health & Safety (EHS) incidents throughout Boart Longyear's global operational footprint is a critical component of our EHS management system. Our Global EHS Information Management System (GEMS) is a web-based program that captures data relating to injuries, motor vehicle incidents, equipment damage, environmental impacts, and other safety-related incidents.

GEMS quickly disseminates key EHS information on a global scale. It does this via instant e-mail notifications for events entered into the system and distributes a variety of customized daily and monthly summary reports.

GEMS has instilled a global consistency throughout Boart Longyear's EHS programs and allows us to deliver a "One Boart Longyear" effort to our clients. We can now avoid EHS incidents in Chile based on response to incidents at other global operations, such as from trends that are happening in Russia, Canada, or Indonesia. Our GEMS system allows us to recognize, evaluate, and control hazards arising in our workforce.

# BOART LONGYEAR™

## GEMS Daily Incident Report

Corporation: [NA]  
Region: [NA]  
Country: [NA]  
Business Type: [NA]

Zone/Territory: [NA]  
Location: [NA]  
Incident Type: [NA]  
Date Range: 3/27/2012 - 3/28/2012

Reporting Location	Incident Type	Preliminary Description	Location	Incident Date	Description	Body Part	Injury Type	First Aid	Treatment/Amputation	Date of Injury	Client Name	Entered By
North American M&L Underground, Congo Zone, Canada, Underground, East	Injury/Event	First Aid	Barrow, Ont.	3/27/2012	While taking core after spring with a piece of core to ensure it was working properly, the core broke when the worker pulled on it. The worker then proceeded to attempt breaking a piece of core in the hands without gloves. The core broke on an angle and cut his hand at the base of two fingers.	Hand/Finger/Thumb	laceration	Yes, an (break)	See plant and handover affected area.	3/27/2012	Century	Chris Chabot
Australia M&L, Australia Airport, West	Injury/Event	First Aid	Australia Airport Worktop	3/27/2012	While moving the container from the backhouse moving backwards when he bumped his back on a wall/door way.	Back	Contusion (S)	Yes	General check up. Technician with thought to be in first aid room, due to pain and standing upright quickly.	3/27/2012	Don't know on what site	Roger Gendron
Chile (M&L)	Injury/Event	First Aid	Chile	3/14/2012	Tallerador indica a supervisor que después de cambiar la rueda, supervisor le acompañó a la máquina de forma y solo indica presión constante molecular, lo que significa el trabajo con el computador y la forma a través del teclado, entonces cuando se le dio a la máquina se le dio un golpe en la cabeza y se cayó a la tierra.	Back	Not an Injury	See plant and handover affected area.	3/14/2012	Other (32nd St. Ave)	Don't know	Don't know
North American M&L Surface, Congo Zone, Canada Surface, West	Injury/Event	First Aid	Henson Lake, ON	3/23/2012	While spraying water away from an H2S hot on the dirt, the worker broke the joint was a little bit loose for him. He then stopped on the pipe wrench and used his body weight to break the joint. The joint released and he fell. He fell backwards over the wrench and he fell on his back at an angle. He got up first but as the day progressed he ended up in bed.	Neck	Spinal Cord Injury	Yes, an (break)	See plant and handover affected area.	3/23/2012	Proton Mining	Michael Lefebvre



# IN VEHICLE MONITORING SYSTEM

inthinc™

Boart Longyear employs an in-vehicle monitoring system that provides instantaneous coaching to drivers, and reporting on driver and vehicle performance and location. This program has been implemented on four continents.

## Performance Dashboard Report



## Global Vehicle Tracking Map



## FEATURES & BENEFITS

- In-cab Verbal Coaching
- Seat Belt Use Alerts
- Crash & Roll Over Detection
- Lane Departure & Collision Avoidance
- Road Hazard Awareness
- Emergency Call Button
- Automated Exception Alerts
- Driver/Vehicle Inspection Reports
- Driver/Fleet Scoring
- Work Alone Timer
- Vehicle Inspection Alerts



## GOLDEN RULES OF SAFETY

If the answer to any of these questions is NO, stop, take the necessary corrective action and continue working only when the answer is YES.

### 1 STOP ANY UNSAFE ACTIVITY IMMEDIATELY

- Are you satisfied that the process you are being asked to follow is safe?
- Are you satisfied that your co-workers are behaving in a safe manner?
- Are you performing your tasks without taking short cuts?

### 2 YOU MUST BE FIT TO DO THE JOB

- Have you received training and instruction in the task you are about to perform?
- Are you competent in your ability?
- Are you physically able to safely complete the task?
- Are you free from the influence of drugs and/or alcohol?
- Are you free from fatigue?
- Are you able to focus on the task and not pre-occupied with other issues?

### 3 CONDUCT A RISK ASSESSMENT BEFORE STARTING ANY ACTIVITY

- Have you completed your pre-shift checks and corrected the defects?
- Have you closely examined your workplace to ensure that no adverse changes have occurred since your last shift?
- Have you identified possible hazards and associated risks?
- Have you developed controls to protect everyone from the hazards?
- Have you communicated the controls with the team?

### 4 USE THE CORRECT TOOLS AND SAFETY EQUIPMENT FOR THE JOB

- Do you have the right equipment for the job?
- Are you able to use your equipment as it was - intended to be used?
- Is your PPE (Personal Protective Equipment) appropriate for the task at hand?
- Are your tools in good condition?
- Are you complying with safety signs and other instructions?

### 5 MAINTAIN A SAFE BODY POSITION AT ALL TIMES

- Can you complete the task without the risk of falling?
- Can you maintain good posture during the task?
- Can you complete the task without over-reaching?
- Can you complete the task without over-exerting or injuring yourself?
- Can you remain out of the line of fire from machinery, falling objects, stored energy or vehicles during the task?

### 6 ENSURE NO CONTACT WITH ANY SOURCE OF ENERGY OR A HAZARDOUS SUBSTANCE

- (Rotating machinery, electricity, pressure in pipes and hoses, etc.)
- Are all the required safety guards, barriers, handrails and other safety features in place?
  - Are you able to meet the requirements of the Material Safety Data Sheets (MSDS) before you start work?
  - Is the ventilation or extraction system working?
  - Are you sure all the energy sources have been controlled, isolated or released before you start any work?





## RULES OF THE ROAD

Safe driving is an essential component of the way we do business at Boart Longyear. These Rules of the Road are designed to protect you, your passengers and the public. Adherence to the following is a condition of employment.

### 1 YOU MUST BE AUTHORIZED TO DRIVE

- Licensed
- Trained
- Competent

### 2 UNDERSTAND THE RISKS OF THE JOURNEY

- Complete pre-trip risk assessment

### 3 DO NOT DRIVE WHILE IMPAIRED

- Under the influence of drugs or alcohol
- Fatigued
- Distracted
- Ill or physically limited

### 4 ENSURE VEHICLE IS SAFE TO OPERATE AND ROAD-WORTHY

- Perform pre-operational check
- Secure your load/cargo

### 5 IDENTIFY HAZARDS BEFORE MOVING THE VEHICLE

- Walk around your vehicle
- Sound audible alarm when backing
- Use spotter when available

### 6 WEAR SEAT BELTS AT ALL TIMES

- All occupants in seats with seat belts buckled
- Except when driving on an ice road
- No Passengers in truck bed; no hitchhikers

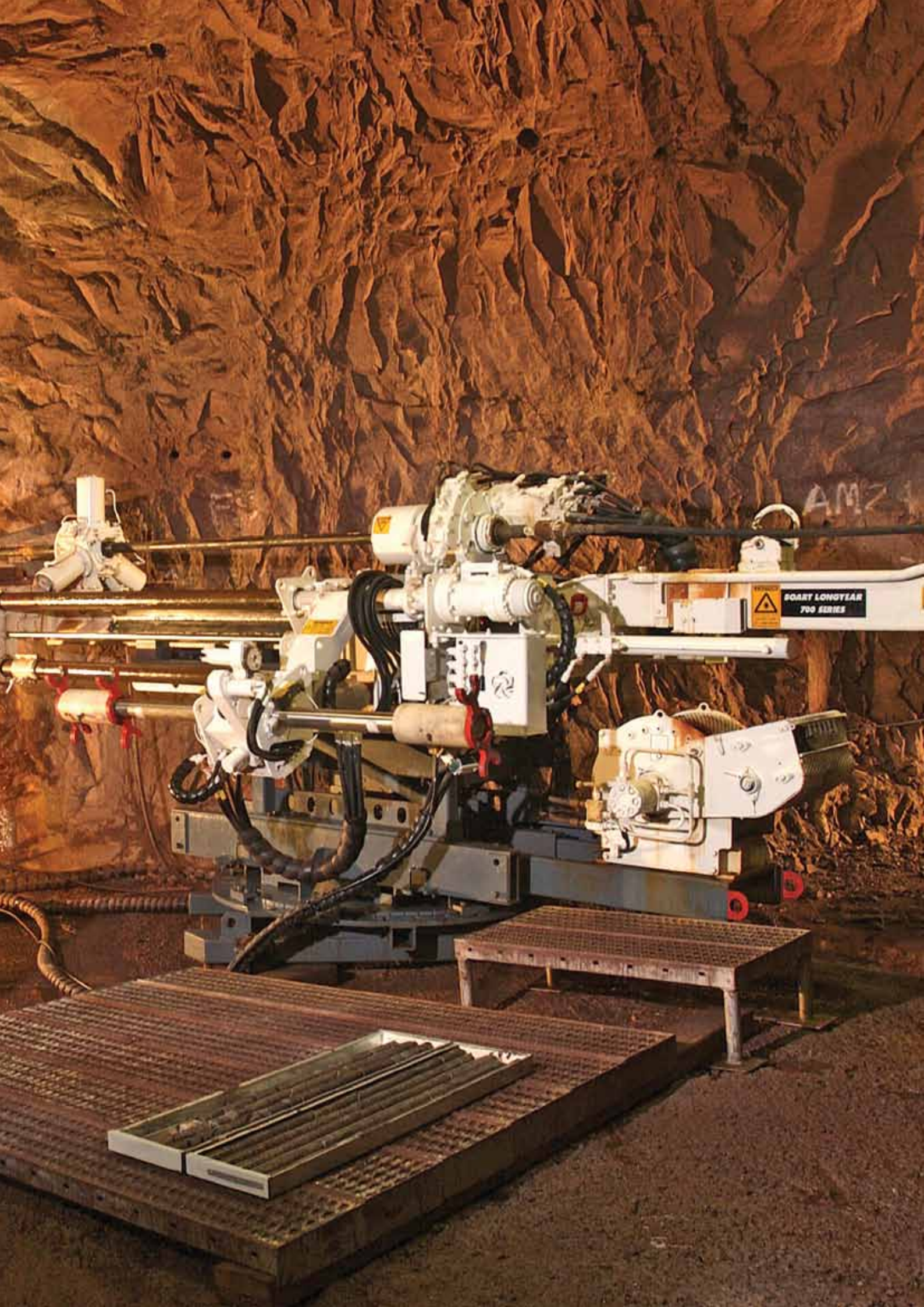
### 7 OBEY POSTED SPEED LIMITS

- Slow down when road/weather/traffic conditions warrant

### 8 SECURE YOUR VEHICLE WHEN PARKED

- Place the transmission in park or in gear
- Set the parking brake
- Chock tires as required
- Control access to keys





BOART LONGYEAR  
700 SERIES



# SAFETY INNOVATIONS



# DRILL CONTROL INTERFACE (DCi™)

The Drill Control Interface (DCi) provides drilling contractors a fully electronic interface to safely and efficiently operate underground drilling equipment. The DCi™ is a substantial step for increasing safety on site by moving the driller away from moving parts and hydraulic hoses.

- Increases productivity by allowing driller to operate rig and rod handler from a distance
- Compatible with LM™75 and LM™90 - existing LM™ series drill rigs can be retrofitted
- Features one touch rod feed and pull functionality
- Integrated system controls provide immediate feedback of drilling conditions
- Data logging for easier report analysis



# DRILL CONTROL INTERFACE™ (DCi™) PROVIDES UNDERGROUND EFFICIENCY

Case Study: **19 percent increase** in six month average  
meters drilled



## Overview:

*Ever Increasing Safety and Productivity*

Owned and operated by BHP Billiton, Olympic Dam is Australia's largest underground mine site with more than 450 kilometers (279 miles) of underground development. The underground mine produces 10 million tons of ore per year using the sublevel open stope mining method.

Boart Longyear has been working at Olympic Dam as part of a long term agreement with BHP Billiton. As the operation continues to grow, improved productivity and safety is demanded for exploitation of newly defined ore zones. Boart Longyear has answered this need by developing drilling technologies and methods for improved diamond core drilling.

The past introduction of rod-handlers, by Boart Longyear, reduced drilling contractors' exposure to the manual handling of rods, leading to limited occurrences of hand injuries. Boart Longyear also participated in a study involving rig-moves which resulted in improved site move time by 11 percent. Now Boart Longyear has developed and implemented the Drill Control Interface (DCi) to increase the efficiency, productivity and safety of the LM™ series of underground diamond core drill rigs.



## The Challenge:

*Increase productivity of Underground Diamond Core Drilling*

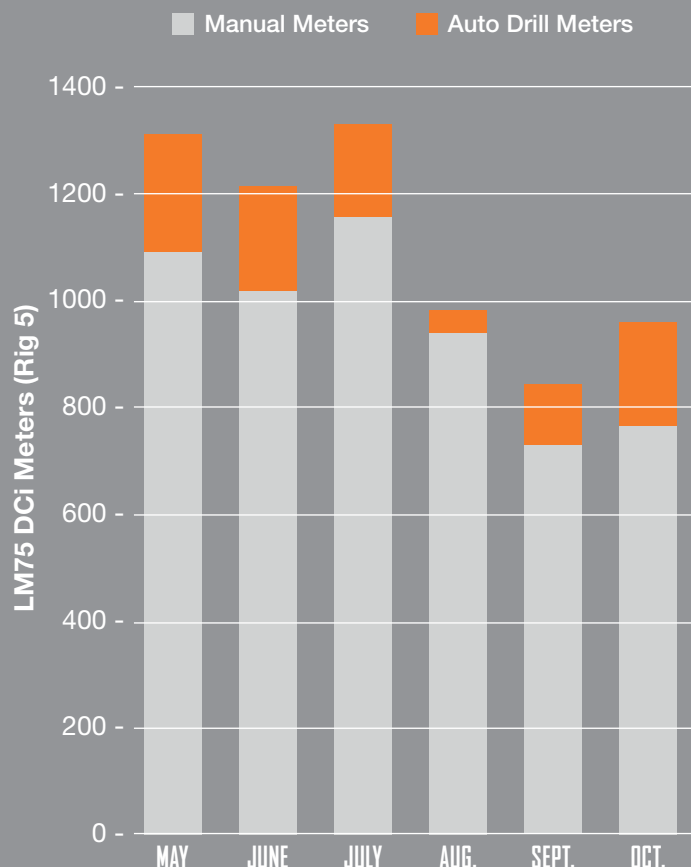
Boart Longyear provides diamond core drilling services at the Olympic Dam mine site. Currently operating five LM75 diamond core drill rigs, Boart Longyear drills more than 55,000 meters a year. Diamond drilling is used to extract rock samples (core) for analysis of the Olympic Dam ore body geometry and to collect geochemical information which will be used to create block models for planning and extraction of future resources.

**Customer:** BHP Billiton  
**Service:** Underground Diamond Core Drilling  
**Location:** Olympic Dam, South Australia  
**Application:** LM™75 and Drill Control Interface™ (DCi™)



## Vital Stats:

- 908 meter improvement compared to historical six month average meters drilled
- AUD \$2.90 average per meter unit cost improvement
- 13.5 percent monthly productivity increase



**AUD \$2.90**  
per meter  
unit cost  
improvement

**13.5%**  
monthly  
productivity  
increase

**908**  
meter improvement  
compared to six  
month average



## S250-M3 ROCK DRILL

The new S250-M3 has significantly improved the industry standard S250 offering 3 primary configurations as well as advanced noise suppression.

- **Less Noise:** Independent testing reported the S250-M3 produced 50% (6 dBA) less sound pressure than the leading competitor rock drills.
- **Less Cost:** Due to reduced amount of energy transferred into the components of the S250-M3, less wear is experienced.
- **More Torque and Penetration:** The S250-M3 channels more energy to the face of the rock and less into the body of the driller operating it.
- **Improved Efficiency:** Torque increased by 39% and penetration by over 6 inches per minute at 110 psi.



# ROLLER LATCH™ UNDERGROUND HEAD ASSEMBLY

Boart Longyear is pleased to launch a new underground head assembly featuring Roller Latch™ technology that allows for greater pump-in speed and productivity while utilizing large ball bearings for latching and hold-back braking to retain inner-tube assemblies in the drill string for dramatically safer operations.

- MKii™ Spearhead head assembly for added strength and safety, features self-lubricating nylon to reduce wear, self-centering spearpoint with multiple detent positions.
- Unique hold back brake retains inner-tube assemblies in the drill string for safer operations in inclined and up-angle holes.
- Self locking Roller Latch eliminates the need for adapter couplings by using a locking coupling.





## RC™ ROD HANDLER

Reduce risk by putting the Boart Longyear rc rod handler to work for you. 76 Rods per shift, 300 shifts per year, 22,800 rods per year, up to 4,240,800 Kg per year.

- The rc rod handler eliminates more than 14 tons of manual rod handling per shift or 4,200 tons per year.
- The rc rod handler's innovative dual clamping jaws are equipped with dual locking systems to prevent rod drops.
- Available as an option on the LC™ and LX™ range of heavy-duty exploration drill rigs, the rc rod handler can be fitted to existing Boart Longyear RC Rigs.

# LM™ /LF™ ROD HANDLER

Boart Longyear offers the rod handler as an option for the LM™ Underground Coring Rigs and the LF™ 130F Surface Coring Rig.

The rod handler sets new standards for ease-of-use, versatility, and most importantly, safety. Utilizing innovative high capacity springs acting on three tungsten carbide insert jaws, the rod handler increases productivity while minimizing injury associated with manual rod handling.

- Movable control panel allows optimal viewing angle
- Laser safety system halts drill operations if laser beam is broken
- Manual rod handling is reduced
- Safety sensors enable detection of drill rod, ensuring safe loading position
- Operator fatigue is reduced, improving safety
- Hard stops ensure fast and accurate rod alignment
- Rod spinners enables hands-free make and brake of drill rods





# SPLIT TUBE LOADER

In the field split tubes and outer casing can become sharp and contain metal burrs. Employees can receive hand lacerations and injuries due to these conditions, many times even through gloves.

Together, our drillers and engineers developed the Split Tube Loader that is designed to ergonomically fit employees' hands, keeping fingers away from dangerous areas.



# ROD LIFTER

Our new rod handling tool has been developed to keep hands away from the rods, while maintaining two handed operation. This tool can be used to load, unload, and roll rods while on the drill site, in the distribution center, or in the manufacturing plant. Because two hands can be used, this tool is more versatile for safely manually transporting rods in a variety of positions.

# SLIDESLEDGE

The Slide Sledge®, multi-head hammer, is an innovative tool that can replace most hammers currently used on the job. This new tool eliminates risks related to swinging and the impact of a traditional hammer. A variety of tips allows precise application of directed force to work piece.



## SAFETY GLOVES

Three glove styles are being added to Boart Longyear's personal protection equipment (PPE) line up. These products were chosen as a result of extensive field tests and cost analysis.

These gloves offer:

- High visibility
- Superior cut resistance
- Insulated protection down to -20°
- Waterproof barrier to keep hands dry
- Impact protection on top of hands and full length of fingers

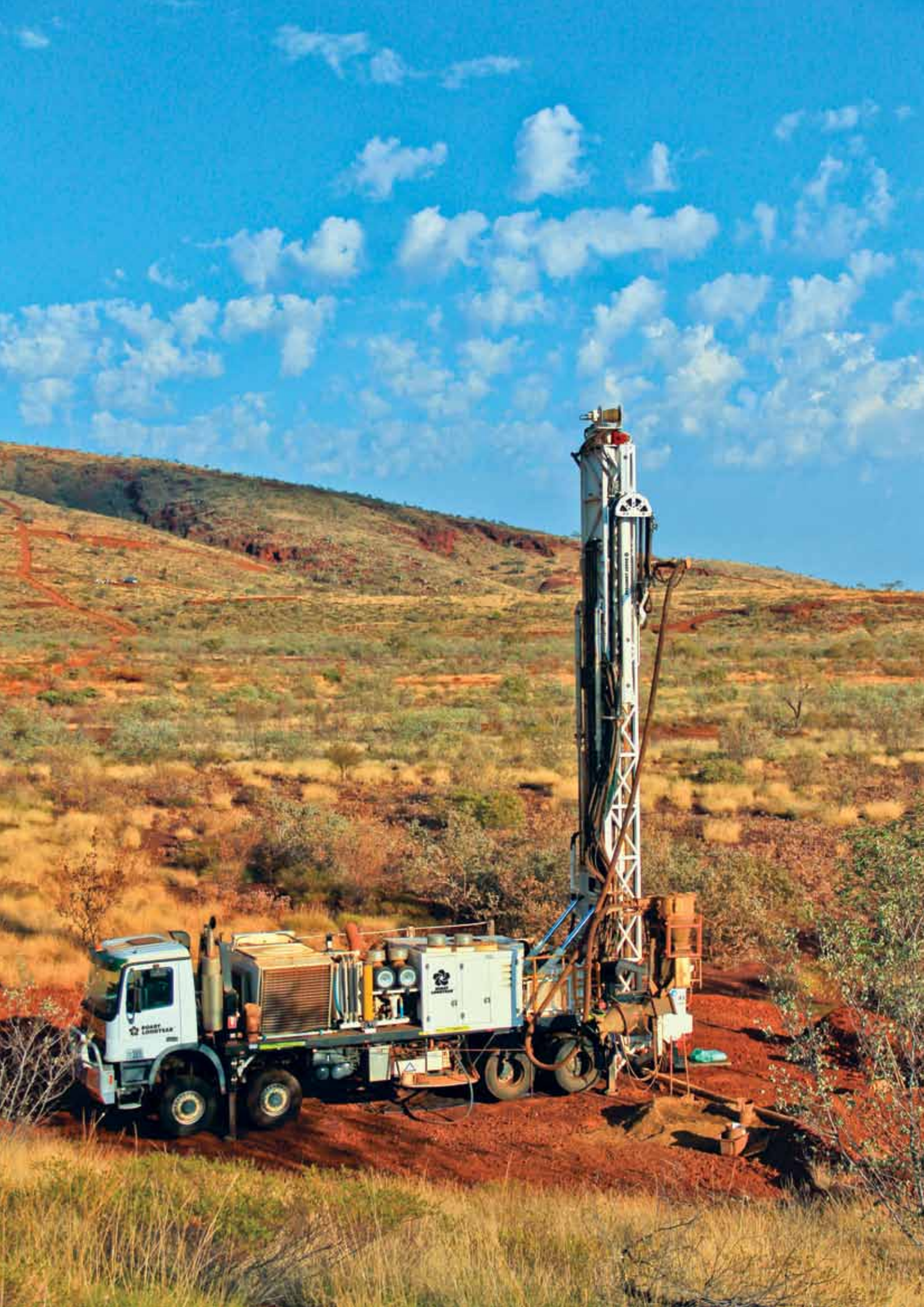








# SUSTAINABLE SOLUTIONS

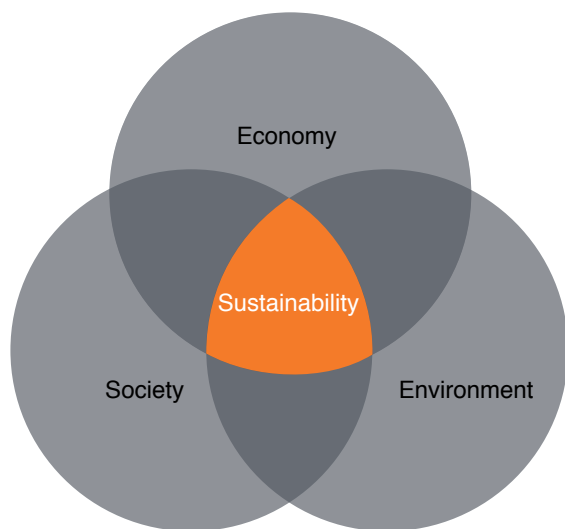




# ENVIRONMENTAL SUSTAINABILITY

The formal incorporation of environmental principles into the Boart Longyear business model.

- An evolution beyond ISO-14001 certification
- Global application to all manufacturing, support, and drilling services activities



## METRICS

### Air Quality Impacts

- Engine hours of operation
- Fuel consumption (diesel, gasoline, natural gas, propane)
- Fleet engine inventory and specifications
- Vehicle mileage
- Airline travel mileage

### Energy Conservation

- Electric power consumption

### Waste Minimization

- Waste generation
- Recycling

### Hazardous Materials Inventory and Minimization

- Hazardous materials inventories
- Hazardous waste generation

### Water Quality Impacts & Conservation

- Spill Incidents (reportable and non-reportable)
- Water consumption

## IMPLEMENTATION PLAN

2012:  
Program  
announcement and  
data collection of key  
performance indicators

2013-15:  
Data analysis,  
continued data  
collection and  
establishment of  
interim goals

2016:  
Program  
assessment





# AIR QUALITY CONTROLS

Clean, healthy air for our employees, families, and communities.

## **Tracking, management, and reduction of air emissions and greenhouse gases**

- Fuel and power consumption
- Mobile equipment engine hours
- Vehicle miles
- Air travel
- Volatile organic compounds



### **Water-Based Paints – Salt Lake City, USA, Mississauga, Canada, and Wuxi, China**

Transitioned from solvent-based to water-based paints for the painting of all percussive drilling products and diamond bits in the Mississauga, Canada, Salt Lake City, USA, and Wuxi, China manufacturing facilities. The use of water-based paints has reduced paint-related emission of volatile organic compounds (VOC) by approximately 33% (2.6 tonnes) annually. Equivalent to the emissions of 200,000 vehicle kilometers.



### **HVLP Spray Guns (Salt Lake City, Mississauga, Wuxi and Drilling Services Shops)**

Implemented use of high volume, low pressure paint spray guns at Salt Lake City, Wuxi and Mississauga for painting of percussive drill products. Eliminated about 40% of paint and paint thinner solvent use, and associated VOC emissions of 2.1 tonnes. Equivalent to the emissions of 160,000 vehicle kilometers.

### **Mississauga Heat Treat Furnace**

Installed a high-efficiency electric induction heating coil system at the Mississauga facility, reducing annual natural gas consumption by 3.1 million m<sup>3</sup> with a concurrent reduction of 7,000 tonnes of CO<sub>2e</sub> greenhouse gas emissions. Equivalent to taking 1,200 passenger vehicles permanently off the roads.





# ENERGY AND WATER CONSERVATION

Minimizing consumption of scarce and crucial resources.

## **Track and manage power and water use at permanent facilities and job sites**

- Evaluate energy efficiency opportunities at permanent facilities
- Incorporate LEED™ technologies in new buildings and evaluate opportunities for alternative energy at all facilities
- Implement water conservation measures at permanent facilities and job sites
- Limit job site impacts to water quality





### Wuxi, China Waste Water

Reduced hazardous waste water disposal by 90% (1.1 million liters annually) by reverse osmosis filtration and reuse at the Wuxi facility. Equivalent to the water required for more than 5,000 car washes @ 200 liters per wash.



### Relamping at Mississauga, Canada and North Bay, Canada

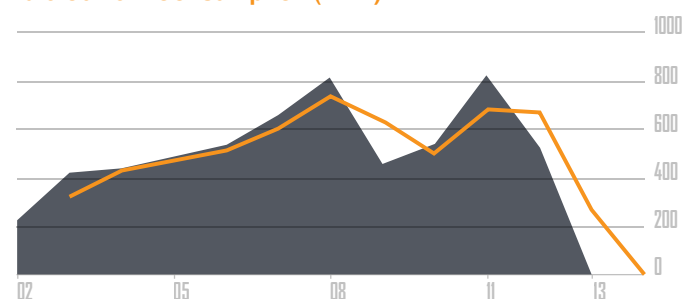
Installed high-efficiency lighting in the company's North Bay and Mississauga facilities with a resultant 400,000 kWh in annual energy savings. Equivalent to the annual power consumption of 40 US homes.

### Energy Management System at Eiterfeld, Germany

Installed a capacitor-based idle current management system to store low-demand electric power during off-peak hours. This avoids placing high energy demand from electric motors and friction welders on the regional electric grid during peak demand hours.

### ELECTRICITY CONSUMPTION (Mwh)

Idle Current Consumption (Mwh)





The background of the entire page is a close-up photograph of several rectangular metal plates. These plates are heavily corroded, showing a thick, flaking layer of orange-brown rust. The rust is unevenly distributed, with some areas appearing more severely eroded than others. The underlying metal is a dull, greyish-blue color, visible through the cracks and where the rust has chipped away. The lighting is somewhat uneven, highlighting the texture of the rust.

# WASTE AND HAZARDOUS MATERIALS MINIMIZATION

Respecting our hosts and neighbors and causing no harm to communities.

## **Track and manage all major waste streams and hazardous materials inventories**

- Implement waste minimization programs for manufacturing and maintenance facilities
- Systematically reduce the use and inventory of hazardous materials in our shops and job sites
- Achieve a global reduction in hazardous materials risk



## Salt Lake City, USA Bit Plant Carbon Dust

Reduced annual solid waste generation at the Company's Salt Lake City bit manufacturing plant by 75% (265 tonnes) by recycling waste graphite dust. Equivalent to the annual solid waste generation of about 100 four-person families.



## Waste and Utility Tracker (All Global Facilities)

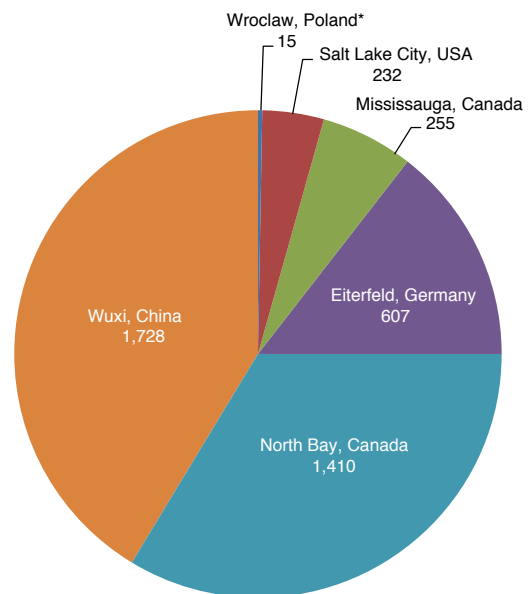
In 2011, we initiated the routine documentation of all major utilities, waste streams and recyclables at six manufacturing facilities. This process was rolled out in late 2013 to all global drilling service maintenance shops and should be completed by year end 2014. This process will provide several key performance indicators such as fuel and water use, waste generation, and recycling activities.

### Waste and Utility Tracking

- Electricity
- Natural Gas
- Propane
- Water
- Hazardous Waste
- Solid Wastes
- Waste Oil
- Waste Coolant
- E-Waste



## 2011 STEEL RECYCLING = 4,247 TONNES



Note: Figures below site name are tonnes.

## Hazardous Materials Inventories (All Global Facilities)

All global facilities have completed a systematic inventory of hazardous materials, and in 2013 will apply a scorecard approach to compare year over year reductions in hazardous materials risk. This process will allow evaluation of facility risk and implementation of steps to minimize the use, storage and disposal of hazardous materials.







# GLOBAL COMPLIANCE

Boart Longyear has established an uncompromising policy of conducting business in compliance with local laws and international standards for ethics and integrity. We consider compliance to be an essential and fundamental component of the quality of our products and services.

## CODE OF BUSINESS CONDUCT

The Boart Longyear Code of Business Conduct establishes high standards of ethical and legal behavior in all facets of Boart Longyear's business throughout the world.

The Code:

- Emphasizes Boart Longyear's commitment to integrity, ethics and compliance with the law
- Sets forth standards of ethical and lawful behavior
- Provides reporting mechanisms for known or suspected ethical or legal violations
- Requires all employees to report any suspected wrongdoing

Adherence to this Code is the obligation of all Boart Longyear employees, officers and directors.

## COMPLIANCE STRATEGY

Boart Longyear has created a strategy to ensure its compliance success:

- Expat workforce obtains all proper visas and permits
- All Boart Longyear entities are included in a global audit program
- Global workforce participates in regular online and in-person compliance training
- Entities and operations are insured globally
- Payroll and accounting is overseen regionally, by local experts to ensure proper payments of taxes
- An anonymous global whistle blower hotline is utilized to allow employees to report any suspicious practices

## ONLINE GLOBAL COMPLIANCE TRAINING

All Boart Longyear employees are expected to know and follow the Boart Longyear Code of Business Conduct, related policies, and applicable law. To help facilitate this, the Boart Longyear online global legal compliance training was developed to familiarize employees with common legal issues faced in the workplace.





# PACI: PARTNERING AGAINST CORRUPTION INITIATIVE

The World Economic Forum's PACI organization invited Boart Longyear to be an active member. PACI is a global anti-corruption initiative, developed by companies for companies. PACI offers a risk mitigation platform to help companies:

- Design and implement effective policies and systems to prevent, detect, and address corruption
- Benchmark internal practices against global best practice through peer exchange and learning
- Level the playing field through collective action with other companies, governments, and civil society

## GLOBAL CONFIDENTIAL COMPLIANCE HOTLINE

To encourage employees around the world to report any suspicious business activities or unsafe work environments, Boart Longyear has a Compliance Hotline. This tool is available in every country, 24 hours a day, seven days a week. Employees can access the hotline by telephone or online.



**THE BOART LONGYEAR CONFIDENTIAL COMPLIANCE HOTLINE**

The Boart Longyear Confidential Compliance Hotline is a confidential and anonymous system to report workplace concerns or violations such as:

- Fraud
- Threats or Harassment
- Discrimination
- Theft
- Workplace Substance Abuse
- Unsafe Workplace Conditions
- Mismanagement
- Financial or Auditing Concerns

You can make a confidential report by telephone or over the internet 24 hours a day, 7 days a week. The information will be collected by MySafeWorkplace®, an independent, third-party service chosen by Boart Longyear to provide employees with a confidential and, if desired, anonymous method to report their workplace concerns. Reports can easily be made over the internet. The internet reporting site is in English, but your report can be made in another language by telephone. If you need translation assistance or do not have access to the internet, use the dial-in numbers for your region listed below. Please note there may not be a telephone number specific to your location. If there is not, please use the collect call (reverse charges) number provided. If you are reporting by phone and need translation assistance, there may be a short delay while translators are added to the call.

When you call to file a report by telephone, the operator will receive your complaint and assist you in providing the necessary information. After filing a complaint by telephone, please be aware you should periodically call MySafeWorkplace® to receive messages or communications from Boart Longyear related to your complaint. If you wish to remain anonymous, your identity will not be disclosed to Boart Longyear and all communication will be through the MySafeWorkplace® system.

**CONFIDENTIAL 24/7 ACCESS**  
 US & Canada: 1.800.461.9330  
 Australia, New Zealand, The UK, Ireland  
 And South Africa: +800.777.9999  
 Any Other Location: Call Collect +1.720.514.4400  
[www.mysafeworkplace.com](http://www.mysafeworkplace.com)



My Safe Workplace Poster







# CONTACT INFORMATION

## **Global Headquarters**

10808 South River Front Parkway  
Suite 600  
South Jordan, Utah 84095  
United States of America  
info@boartlongyear.com

Tel: +1 801 972 6430  
Fax: +1 801 977 3374

## **Asia Pacific Regional Office**

26 Butler Boulevard  
Adelaide, 5950  
Australia  
infoAP@boartlongyear.com

Tel: +61 8 8375 8375  
Fax: +61 8 8375 8497

## **Latin America Regional Office**

Portal Riesco  
Av. El Salto 4001, Huechuraba  
Santiago, Chile 858 0641  
infochile@boartlongyear.com

Tel: +56 2 595 3300  
Fax: +51 242 671

## **Europe, Middle East, and Africa Regional Office**

12 Avenue des Morgines  
CH1213 Petit-Lancy, Geneva  
Switzerland  
infoEU@boartlongyear.com

Tel: +41 22 709 0800  
Fax: +41 22 709 0801

## **North American Regional Office**

2442 South Sheridan Way  
Mississauga, Ontario  
Canada L5J 2M7  
info@boartlongyear.com

Tel: +1 905 822 7922  
Fax: +1 905 822 7232



