THE DPATH GROUP



Mining Contractors and Engineers

BORDEN GOLD MINE, CANADA





Redpath is a multinational, full-service underground mining contractor with a comprehensive list of international clients.

Our company is guided by "Our Philosophy" and "Guidelines for Success", which have been part of our organization since the

start and are still relevant today. These long-held principles demonstrate Redpath's commitment to the incorporation of environmental, social and governance (ESG) criteria into our organization.

Since 1962, Redpath has maintained these four commitments:



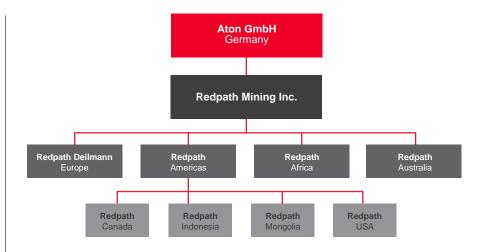
PROVIDE a level of service to the mining industry which exceeds normally accepted standards.



CREATE PROVIDE a desire in the industry for our continuing services.



CONTROL growth in order to provide a high level of service to the industry.



It is our desire to serve our clients well, establish relationships that withstand the test of time and be a source of pride for our people now and well into the future.

GEORGE FLUMERFELT Chief Executive Officer The Redpath Group of Companies

OUR PEOPLE ARE OUR GREATEST RESOURCE

6,500+

employees globally

ACCREDITED professionals with a wide range of specialized skills

MULTIDISCIPLINARY in-house engineering team

PROVEN TRACK RECORD of working in some of the world's most difficult conditions



Redpath's employees are the heart of the company's success and it remains through them that the company will continue to expand and flourish.

> Our leadership teams are multifaceted, and have extensive underground experience. This is critical to meeting and exceeding every client's standards.

Our management teams have:



100s OF YEARS of combined experience to bring to your project

PHILOSOPHY AND GUIDELINES

We never criticize our competition.

OUR PHILOSOPHY

The Redpath Group Philosophy makes a commitment to:

provide a level of service to the mining industry which will exceed normally accepted standards;

create a desire in the industry for our continuing services;

provide scope and challenge for our employees;

control growth in order to maintain a high calibre of service to the industry.

This philosophy has served Redpath well since 1962, and it will continue to support our belief that, at Redpath,

"Challenge is an important part of life."



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GUIDELINES FOR SUCCESS



We are honest, fair and responsible.

We make accurate schedules and budget forecasts that are managed and met to the best of our abilities without surprise.

> We work by our principles of "Safety - First, Last And Always."

> We never criticize our competition.

We give and publish well-written technical papers.

We do not overcommit.

We ask if we don't know the answer.

We remember that our goal is to serve our clients well. Excuses are unacceptable.

We act in the long-term interest of our company and our clients.

We do not take advantage of short-term situations.

redpathmining.com

Redpath's founder, Jim Redpath, formulated the company's philosophy at an early stage of our organization's existence. The philosophy derived from his belief that the focus of every employee must be on doing a good job for the client.



Jim Redpath at Black Angel Mine in Greenland. The company built an early reputation for successfully tackling projects in extreme climates and locations.

To this day, this fundamental principle is present on every work site and in every corporate communication. All projects are viewed through the lens of how a decision or action will align with these corporate values.





Mining Contractors and Engineers



MINE DEVELOPMENT



HUNDREDS of kilometres excavated annually.

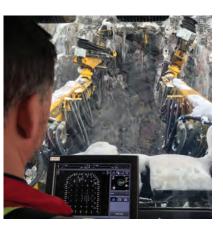
With one of the most modern and comprehensive contractor fleets in the industry, Redpath provides a full range of underground development and construction services. Lateral development, ramps/declines and mass excavation are prime elements of our mine development services.

We have a broad range of experience in using split-feed jumbos in lateral development projects around the world. We have also partnered with some of our clients to work towards reduced emissions and operator exposure by employing zero-emission, battery-operated equipment. These methodologies provide not only environmental benefits, but also improve safety, productivity and versatility.

Known for our ability to offer solutions for varying and difficult ground conditions, our expertise in performing high-quality mining in extreme climate situations is unique in the industry.









SIGNIFICANT PROJECTS:

PT Freeport Indonesia Mines Indonesia
Oyu Tolgo Mine Mongolia

Maseve Platinum Mine South Africa





We remember that our goal is to serve our clients well. Excuses are unacceptable.

SHAFT SINKING

Redpath is recognized globally as a leader in shaft sinking.



530+ SHAFTS & 200+ KM of shaft sunk on 5 continents.

Working in some of the most extreme conditions and remote locations, such as the jungles of South America, the Gobi Desert of Mongolia, the high Arctic or the mountains of Indonesia, Redpath has the experience and expertise to mobilize people and equipment to safely execute any shaft project.

From concept to commissioning, we combine our global skills with innovative techniques, regulatory knowledge, regional expertise and cultural sensitivity. Our engineering teams continuously strive to bring new benchmark sinking applications to the forefront throughout the world. Recent developments focus on making our systems safer, more productive and easier for training purposes. Improved monitoring and communication capabilities between field teams and home office through a variety of wireless applications have also been standardized.

SIGNIFICANT PROJECTS:

Freeze Shafts

- Mosaic K3 Mine Canada
- Nezhinsky Mine Belarus
- Uralkali Ust-Jaiwa Mine Russia

Shaft Sinking

- Oyu Tolgoi Mine Mongolia
- Éléonore Mine Canada
- La Colorada Mine Mexico

MASS EXCAVATION



30,000+ M³ WITH TOTAL HEIGHTS OF 50+ METRES depending on the infrastructure requirement.

Redpath has extensive experience and expertise in safe completions of mass-excavation projects. Mass excavations are large complex openings designed to house various infrastructure components, including crushers, conveyor transfers, muck chutes, concrete batching plants, underground hoist rooms and nuclear storage and research facilities.

The design of mass excavations is complex and involves a combination of lateral and vertical development specialty techniques. Drill-and-blast patterns with programmable detonators are sometimes used to control vibrations and overbreak.

Excavations are undertaken with various equipment and methods, including jumbos and long-hole drills, as well as hand-held or mechanical methods. Multi-level excavation sequencing is applied with multiple passes of benching and/or slashing.



We give and publish well-written technical papers.

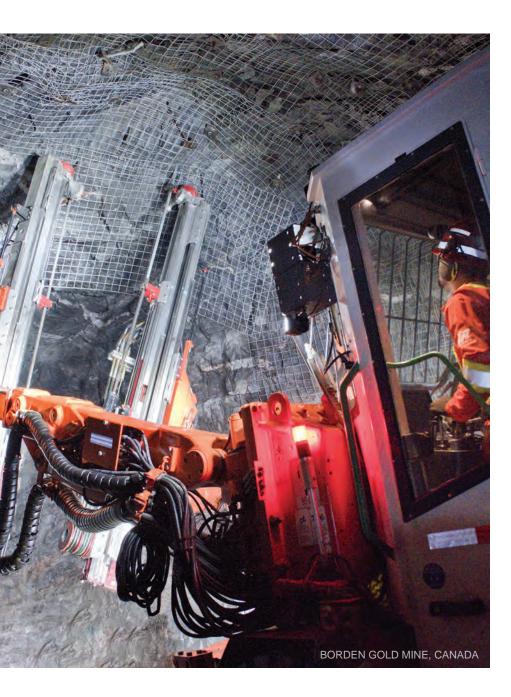








- PT Freeport Indonesia Mines Indonesia
- Kidd Creek Mine Canada
- Oyu Tolgoi Mine Mongolia



PRODUCTION MINING



WE BUILD & OPERATE COMPLETE TURN-KEY OPERATIONS

From a specific scope of work to a complete turn-key mining operation, Redpath has the knowledge, experience, people and equipment to build the entire surface infrastructure and underground mine. We also provide full production-mining services, as demonstrated at PT Freeport Indonesia's Grasberg Block Cave operations, where over 100,000 tonnes are extracted daily. With extensive knowledge of services including production drilling, ore haulage, crushing and conveyance, Redpath is capable of assisting with any scope of project from beginning to completion.







- Lady Loretta Mine Australia
- Pogo Mine United States
- PT Freeport Indonesia Mines Indonesia

RAISEBORING



EXTENSIVE RAISE DRILL FLEET

capable of boring raises up to 8 metres in diameter.

The Redbore family of raise drills offers a full range of raise depths and diameters, including upream capabilities of up to 2 metres in diameter, for virtually any application.

As both an original equipment manufacturer and a contractor, Redpath Raiseboring has the ability to customize the equipment to suit unique client requirements. All machines are designed with a focus on safety and productivity. Modern technology and increased automation mean safer operations and minimized risk exposure. The fleet is also of low profile and compact design, which facilitates transportation underground and requires smaller excavation sizes, resulting in significant savings.

Redpath's Raisebore team has a strong portfolio of successful projects, often completed in difficult, remote settings and harsh climates. One of the core values at Redpath is innovation, and Raiseboring has provided a valuable platform on which to grow our innovative spirit.

To expedite the progression toward self-sufficiency, Redpath developed the drill carrier the Redtrax to transport the Redbore series of raise drills underground.

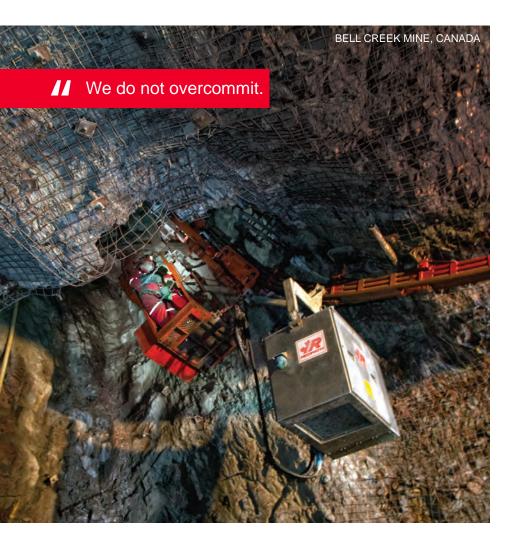








- Mopani Mine Zambia
- Macassa Mine
- Canada
- PT Freeport Indonesia Mines Indonesia
- Cadia Mine Australia



MECHANIZED RAISE MINING



DESIGNED AND INTRODUCED THE PATENTED BATTERY-ELECTRIC MRC IN 2008.

Redpath has the industry's largest underground raise mining equipment fleet. Our innovative, patented raise mining designs and concepts have served the sector for over 35 years. By building many of the components we use on a job site, we ensure that the workforce operating the equipment has intimate knowledge of performance and maintenance specifications.

We offer flexibility, economy and excavation speed. Those advantages, plus in-house repair and training facilities, enable us to confidently meet all demands for:

- ✓ Ventilation
- Production slot raise
- ✓ Shaft piloting
- ✓ Manway/escapeways

- ✓ Ore and/or waste passes
- ✓ Narrow vein mining
- ✓ Raise widening







- North Mine Canada
- Pogo Mine United States
- PT Freeport Indonesia Mines Indonesia

UNDERGROUND CONSTRUCTION

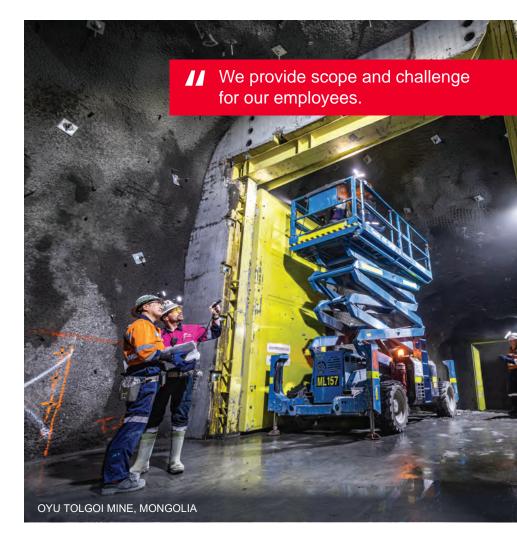


EXPERIENCED in design and construction.

Redpath provides a world of experience in full-range underground mine construction and installation. Our seasoned professionals engineer, design, construct and commission installations for all project sizes and complexities.

Skilled in new infrastructure development, including the building of underground shop facilities and refuge stations, Redpath is also highly recognized for dewatering, rehabilitating, upgrading and re-commissioning mines that are re-entering production. We are also fully capable of building ore handling and conveyance systems consisting of chutes, grizzlies, conveyors, ore transfers, ore and waste bins, crushers and loading pockets.

Mechanical and electrical installations such as internal hoists, portable or permanent substations and air heating/cooling ventilation fan systems, add to our complete range of underground construction abilities and services.









- Konrad Mine Germany
- Oyu Tolgoi Mine Mongolia
- PT Freeport Indonesia Mines Indonesia



MECHANICAL EXCAVATION



SPECIALIST EXPERIENCE

in all areas of underground mechanical excavation and construction.

Redpath offers specialist experience in all areas of underground mechanical excavation and construction. The service is rendered through our Australian office to mine owners across Australia and around the globe.

Mechanical excavation mining methods involving road headers, continuous miners or Tunnel Boring Machines (TBM) are deployed to complete the work.

Noteworthy projects in this sector include the Grosvenor Mine Development and the Kestrel Mine Extension Project. Both mines are located in Queensland, Australia. At Grosvenor Mine, Redpath Australia excavated both the conveyor and transport drifts utilizing an earth pressure balance TBM. This was the first use of a TBM, approved for drift construction, in an underground coal mine in Queensland.

The Kestrel project involved the development of two mine-access drifts by road header method with on-board bolters, and the associated in-seam coal development, to allow the commencement of longwall mining activities.







SIGNIFICANT PROJECTS:

Grosvenor Mine Australia



ENGINEERING AND TECHNICAL SERVICES



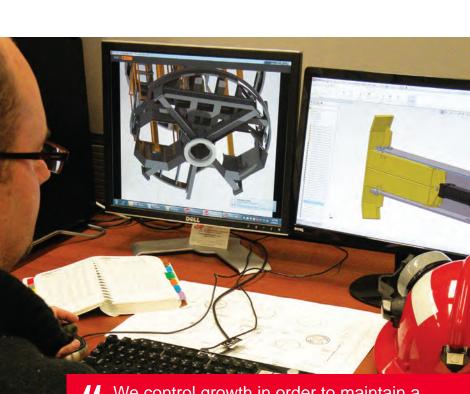
MULTIDISCIPLINED in-house engineering teams.

With years of "hands-on" mining-related experience, Redpath's multidisciplined Engineering and Technical Services teams offer practical, innovative and reliable designs with the ability to provide a total mine package.

The teams' honed knowledge and skills allow us to design, manage and construct all aspects of underground mine infrastructure, including:

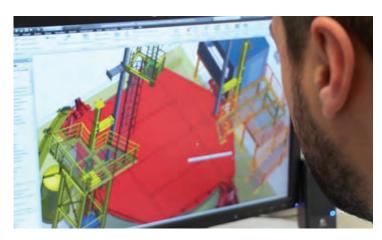
- Crushers
 - Complete hoisting facilities ✓ Shaft of
- Complete hoisting facilities
 Material handling systems
- ✓ Freeze shafts

- ✓ Conveyance systems
- Shaft conveyances
- Custom sinking set-ups



We control growth in order to maintain a high calibre of service to the industry.

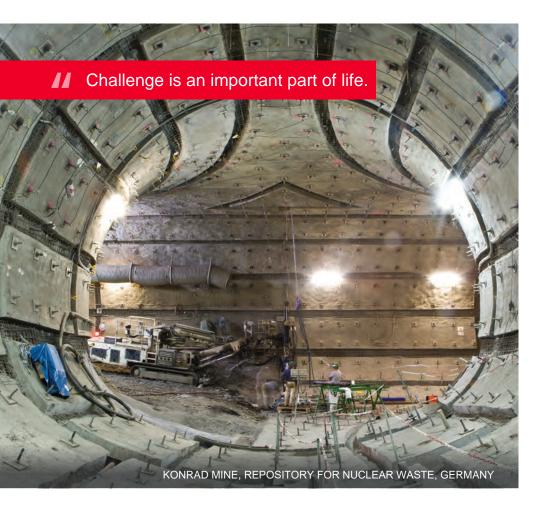




SIGNIFICANT PROJECTS:



Woodsmith Project United Kingdom



SPECIALTY SERVICES



Applying **MINING EXPERTISE** to benefit civil infrastructure development.

Redpath combines knowledge from the civil, tunnelling and metalliferous sectors to provide tailored equipment and processes for underground civil infrastructure projects. Conventional drill-and-blast and continuous mining methods using road headers or Tunnel Boring Machines (TBM) are applied to complete underground roads, rail, water, sewage tunnels, nuclear repositories and other storage caverns.

Projects include the Lake Dorothy Lake Tap, involving the construction of a 250 m horizontal tunnel and tapping into the side of the lake, 36.5 m below the lake surface, enabling the construction of a downstream dam; the re-commissioned Ghaghoo diamond mine in Botswana, where Redpath's team completed a 473 m sand tunnel to reach the orebody, located below 80 metre of desert; and the T2 tunnel in British Columbia, Canada, where Redpath's drilling and blasting expertise ensured a reliable supply of hydroelectric power to an aluminum smelter.







- Lake Dorothy Hydro Electric Tap United States
- Ghaghoo Sand Tunnel Botswana
 - Kemano T2 Project Canada

MOBILE EQUIPMENT



FULL SUITE OF MOBILE EQUIPMENT

scaled to each project's requirements.

The Redpath fleet consists of more than 300 pieces of highly reliable, major underground mobile equipment. Teleremote and battery-operated equipment is used wherever possible, to enhance the safety of our production teams.

Strong and long-standing OEM supply-chain arrangements enable fast delivery times, while our asset-management system ensures secure and consistent availability of equipment throughout every stage of the project.

Redpath's experience in procurement, international logistics and knowledge of global regulations, facilitate the mobilization of equipment and supplies. Fleet transportation is managed internally, enhancing speed and cost-effectiveness.





We provide a level of service to the mining industry which will exceed normally accepted standards.



WHAT WE OFFER



Mining Contractors and Engineers

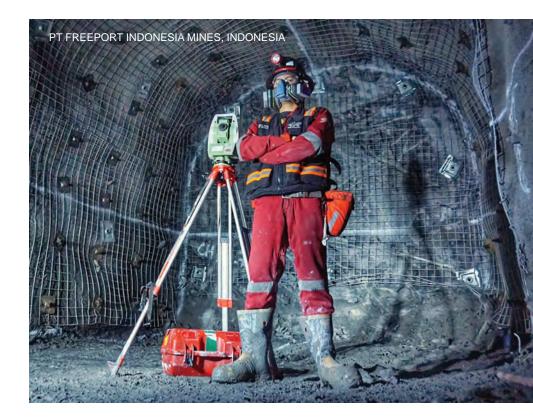
SAFETY

Proactively conducting **SAFETY ACTIVITIES** to protect our miners, with the ultimate goal of zero harm.

At Redpath, the health and safety of our employees and stakeholders are of the utmost importance. We passionately believe that all injuries are preventable and that the work we undertake can and will be completed safely, with no harm to people, the environment or the communities in which we work.

We believe that safety is a shared responsibility and are committed to continuously improving safety and health through employee engagement and empowerment. Redpath provides leadership development training, utilizes robust safety management systems, the latest technology and professional trainers to ensure that our employees have the necessary skills, tools and equipment to work in a safe and productive manner.

We continually strive to achieve the highest standards in health and safety – zero harm. Through the development of a safety culture, built on a common understanding of safety principles and a commitment by all employees, we will meet our goal of "Safety First, Last and Always".





WE HAVE BUILT A SAFETY CULTURE.

We work with our clients as partners to determine the safest strategies to complete every project.



HSET Management Systems:

- Redpath Safety Program
- ✓ Fatality Prevention Program
- Critical Risk Management
- Dedicated Auditing Programs



World Class Training Programs:

- Operational and Supervisory programs
- ✓ Leadership development
- In-Country National Skills Development
- First Aid

NATURAL AND SOCIAL ENVIRONMENT

NATURAL ENVIRONMENT

Redpath is committed to managing all of our operations in a manner consistent with the principles of minimizing impact on our natural environment, doing so in partnership with our clients.

We accomplish this by:

- Adhering to client requirements, policies and procedures relating to the environment on projects that we are performing.
- Incorporating environmental control measures into our project risk assessments.
- Training our employees in the importance of environmental stewardship and complying with environmental rules and regulations at our operations and in the surrounding communities.
- Utilizing processes and practices to prevent contamination, to manage waste and to mitigate impacts on human health and the natural environment.
- Being responsible in design, use, re-use, recycling and disposal of products and materials.
- Implementing measures and practices to improve energy efficiency and to reduce our carbon footprint.



SOCIAL ENVIRONMENT

We passionately believe that community engagement, and being a part of the communities where we operate, is a fundamental part of what we do.

We take an active role in supporting local social programs related to health & wellness, education, children's sports, and community development through donations, fundraising and employee participation.





RELIABLE PROJECT DELIVERY SINCE 1962.

OUR GLOBAL COMMUNITY

Redpath has a proud, long-standing record of successful efforts to help develop training, employment and economic-development opportunities for Indigenous Peoples across our international communities. This endeavour is focused on the following basic principles:

Respect - We ensure careful consideration is given to traditional, cultural and social environmental factors.

Integrity - We treat all people in an honest, fair and responsible manner.

Communication – We actively encourage open dialogue with community leaders and individuals.

Opportunities – We provide locals with opportunities for training and employment, as well as opportunities to supply goods and services.

Community – We contribute to the communities in which we work through sponsorships, training, bursaries and monetary donations.

Teamwork – We work closely with our clients in the planning process, encouraging community engagement and participation from all parties.



WE STRIVE FOR PROTECTION AND ENHANCEMENT OF LOCAL CULTURES AND CUSTOMS.

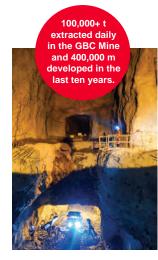


ALLIANCES INCLUDE:

- Innu Inuit Redpath GP Inc.
- Tawich Construction Inc.
- Papuan Seven Tribes, Indonesia
- Nuvumiut Developments Inc.
- Boundary Waters Anishinaabeg Development LP
- KAKE Tribal Corporation

PROJECT HIGHLIGHTS

PROVEN TRACK RECORD ACROSS THE WORLD.



* Grasberg Block Cave Mine and Deep Mill Level Zone Mine

PT FREEPORT GBC AND DMLZ MINES* PT Freeport Indonesia (PTFI) Tembagapura, Indonesia

PT Freeport Indonesia remains the longest client relationship in Redpath history, at 40 years. Redpath has provided a full range of services, contributing to the development of the world's largest block cave operation - the Grasberg Block Cave - where over 100,000 tonnes are extracted per day. The Redpath team also participated in setting a record in lateral development of 400,000 metres in the last ten years at the GBC and DMLZ Mines. Redpath's services to this project include mass excavation, raiseboring, shaft development and underground construction.



OYU TOLGOI MINE

Rio Tinto / Turquoise Hill Resources / Government of Mongolia Gobi Desert, Mongolia

Redpath, through a joint venture agreement, is a major contractor at the Oyu Tolgoi Mine, providing a range of services to the project since 2005. Most noteworthy at Oyu Tolgoi is the installation of the world's largest friction hoist (6.75 m diameter). Sinking shafts 1, 2, and 5 remain Redpath's most prolific shaft projects, with shaft 2 breaking Redpath's record of largest shaft by volume with 124,248 m3 of rock removed in 2018. In addition to these milestones, we provide mass excavation, mine construction and mine development services.



NEZHINSKY MINE Slavkaliy Lyuban, Belarus

The Redpath Deilmann team sank and equipped two freeze shafts aided by Herrenknecht's fully mechanized Shaft Boring Roadheader (SBR) ahead of schedule and with a peak performance of over 7 metres/day.



MINDOLA MINE Mopani Copper Mines PLC Kitwe, Zambia

The deepest raisebored single lift shaft equipped for hoisting in Zambia. The project involved directional drilling and reaming of a 1,892 m x 6.1m diameter shaft. Development goals were met, while achieving 150% of the daily target.



CANNINGTON UNDERGROUND & ROM South32 Queensland, Australia

Partnering with the client since 1995, the scope has included shaft and portal construction, development, production, underground infrastructure installation, ROM management, cablebolting and shotcreting.



ÉLÉONORE MINE Goldcorp Quebec, Canada

The scope of work included designing and building exploration and production shafts, lateral development and raiseboring. Redpath's record for the slot program is the most noteworthy; 110 holes in 1 year, using a Redbore 40-SDR.



ZONDEREINDE MINE Northam Platinum Northam, South Africa

Northam Platinum's Zondereinde Mine has been operational since 1993 and remains profitable, producing 320,000 oz. of platinum annually. Zondereinde serves as the longest standing project ever undertaken by Redpath South Africa.

BRIEF COMPANY HISTORY

ХӨГЖЛИЙН ТҮҮХ

1968:

Канадын уул уурхайн салбарт Жамбо өрмийг анх удаа ашигласан.

1974:

Redpath constructs mining's first "borehole hoisting system" at Brunswick Mining & Smelting to speed up shaft sinking and mine development (New Brunswick, Canada).

1983:

Redpath Robbins Shaft Boring Machine is designed and built.

1988:

Design of Redbore 40 is completed, with two units produced and built.

1989:

Full-face, "Long Round", shaft sinking introduced to Americas at TL shaft for Falconbridge in Sudbury (Ontario, Canada).



1995:

Pioneered and introduced Programmable Logic Controllers (PLC's) for use on mine hoists.

2002:

Portable Alimak/MRC nest setup designed and used for the first time (Canada and Indonesia). Patents battery-powered version in 2008.

2003:

Рэдбор 50 загвар шинээр гарсан.

2005:

Pathways to Excellence Program is introduced, offering a unique training program for supervisors and managers.

2008:

Redbore 100 becomes the world's most powerful and largest capability raisebore machine at its debut at MineExpo in Las Vegas.

2010:

Development of VDSL WiFi communications, monitoring and data collection system begins for shaft sinking operations.

2011:

Development of tunnel shield to establish ramp portal through deep running sands at Ghaghoo Mine (Botswana).

2016:

Design & implementation of 'Shaft Controller System' to provide fully integrated instrumentation, controls and communications in shaft.

2018:

2nd generation SBR sinking machines are designed alongside Herrenknecht and are deployed at Nezhinsky Mine (Belarus).

Challenge is an important part of life.



WHY REDPATH?

OUR PEOPLE ARE OUR GREATEST RESOURCE

Globally diverse and well-rounded, our people are the foundation of our company. Top talent around the world brings a solutions-driven, "we-like-a-challenge" attitude to each project.

SAFETY - FIRST, LAST AND ALWAYS

Our people's safety is our number one priority. We provide leadership development training, robust safety management systems and the latest technology to ensure that our employees work safely and productively.

ACHIEVING SUCCESS TOGETHER

Working collaboratively and drawing on our global teams' expertise, we achieve enduring partnerships and project delivery above normally accepted standards. Our full-service offering grant project efficiencies and cost savings.



TRAINING AND UPSKILLING

On-going training and professional development are key to our strong safety culture and spirit of continuous improvement. We consistently train local workforce from scratch and transfer to our clients' international workforce.

PROJECT CONTROLS

Efficient project management provides our clients with assurance surrounding their investments. Our integrated systems offer intelligence on daily performance, capturing changes, risks and opportunities, which enable efficient decision-making and timely cost control.

SPIRIT OF CONTINUOUS IMPROVEMENT

The drive to enhance, problem-solve and optimize is deeply rooted in our company. Combining our global teams' expertise prompt innovative approaches and technologies that boost safety and speed.

SOLID FINANCES

Project delivery is predictable and secure thanks to Redpath's consistent financial results, efficient supplier arrangements, optimized working capital and economies of scale. This gives us flexibility and allows us to confidently take on large contracts.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

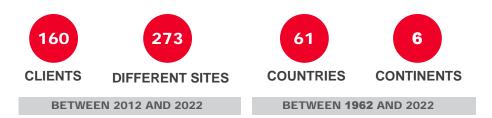
Our commitment to ESG is based on a simple concept outlined in our "Guiding Principles": "We are honest, fair and responsible". This approach, coupled with the equally important "We work by our principles of safety first, last and always", establishes the firm foundation of our company.

OUR GLOBAL COMMUNITY

Worldwide and with clients' support, we endeavour to hire staff from local communities. Employees receive training and are subsequently transferred to clients' workforce. We also strive to create business opportunities for local suppliers and subcontractors.

IN-HOUSE ENGINEERING DEPARTMENT

Redpath's hands-on engineers deliver on-going, swift and customized solutions to our clients and project teams. Multi-disciplined and with full product life-cycle involvement, the department produces industry-leading software and purpose-built patents enhancing efficiencies and safety.





Mining Contractors and Engineers

PT FREEPORT INDONESIA MINES, INDONESIA

