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HOW MINING WORKS

BY W. SCOTT DUNBAR

Finally - Mining in Clear and Understandable Language

How Mining Works explains complex mining concepts in a way simple enough for those who are not familiar with the industry, yet thorough enough to be useful to long-time professionals.

This colorful book presents a logical and sensible sequence for acquiring a strong working knowledge of the world of mining. Chapter 1 provides a quick geology review, explaining how the earth is structured, how, why, and where mineral ores are created; and how technological advances help us make educated guesses about where to locate new mines.

The next three chapters present mining and refining operations. Chapter 2 offers in-depth explanations about the different types of mining, the equipment and procedures needed for both surface and deep mining, and Chapter 3 follows with six methods for processing the ore into usable refined metal. And, since not all mines produce metals, Chapter 4 covers nonmetallic operations that produce coal, diamonds, and aggregates such as clays and feldspars.

The second half of the book puts mining in the context of the wider world. Chapter 5 examines four types of mining waste (including several subcategories) and how to deal with each. Chapter 6 looks at labor practices, environmental sustainability, and worker and community health and safety—all critical in today’s highly regulated environment.

Chapter 7 highlights mining economics, with detailed information on how mine products are priced, monetary arrangements between mines and smelters, and even the impact of reserves on mining’s future.

Chapter 8 takes a visionary yet practical look at the future of mining, covering not only advances in expected areas (like robotics) but also in biotechnology, with a fascinating look at how plants, insects, and various microbes could be used to detect the presence of minerals and extract metals. Appendix A provides a crash course in the chemistry sometimes needed to understand why rock goes in and metal comes out.
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RPMGlobal is the mining industry’s leading enterprise technology, advisory and training provider. We are the market leader in enterprise solutions from mine planning to execution. We have the most advanced scheduling tools in the industry along with leading simulation, costing and execution solutions in both production and maintenance all built on the industry’s only Enterprise Planning Framework (EPF). Our global Advisory Team are the trusted advisors the mining industry turns to. We deliver impartial, expert advice during a mine’s lifecycle from exploration to mine closure including project feasibility and funding, as well as mine development and operations.

6521 Greenwood Plaza Blvd, Ste 275
Greensboro Village, NC 20111 USA
usa@rpmglobal.com

Salt Institute

www.saltinstitute.org

The Salt Institute is a North American based, non-profit trade association dedicated to advocating the many benefits of salt, particularly to ensure winter roadway safety, quality water and healthy nutrition.

405 Fifth Ave South, Suite 7C
Naples, FL 34102 USA
Telephone: (239) 231-3305
info@saltinstitute.org

Schenaugen Flexadux

www.schenaugen.us

Schenaugen Flexadux Corp was founded in the USA in 1974 as a manufacturer of flexible ventilation ducting and is backed by a half century of worldwide engineering experience. Over the years, Schenaugen Flexadux has expanded into a multifaceted manufacturing and distributing company providing flexible lay flat, spiral, rigid, fiberglass and steel ducting, pumpable crib bags, electronic gas detection, and other custom fabricated equipment for the mining, tunneling and oil field. Equipment such as cassette systems, conveyor belt dewatering systems, non-magnetic proximity detection system, gas detection systems and dust collectors make mining and tunneling safer and far more cost effective. Schenaugen Flexadux is fully equipped to assist with all your mining needs with locations in both the eastern and western regions. Schenaugen Flexadux – unsurpassed commitment to quality, details and customer service.

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Fax: (970) 245-9402
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www.seegmillernt.com

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Skelly and Loy, Inc.

www.skellyloy.com

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Solvay Mining Solutions

www.solvay.com

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SRK Consulting is an independent, international practice providing focused advice and solutions to the earth and water resource industries. As a one-stop consultancy, SRK offers specialist services to mining and exploration companies for the entire life cycle of a mining project from exploration through to mine closure. Formed in 1974, SRK employs more than 1,400 professionals globally in over 45 permanent offices on 6 continents. SRK’s specialists are leaders in fields such as due diligence, feasibility studies, mine waste and water management, permitting, and mine closure. The industry background of many of SRK’s staff ensures that advice is not only technically sound but thoroughly practical. Among SRK’s clients are many of the world’s major, medium-sized and junior metal and industrial mineral mining houses, exploration companies, financial institutions, construction firms and government departments.

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