DEVELOPMENT MINERAL DEPOSITS

BUSINESS AREA : COAL MINING

The mineral resources of the United States are vast and varied, and the country is now one of the world's largest producers of a number of important metals and minerals for industry

Why are we talking about the United States in the first place? Because Del Mar Energy's core operations are conducted in this country

The mining industry has always been an important driver of economic growth not only in the U.S. but also globally, contributing to the rapid development that the country has experienced in recent decades. U.S. mining companies are also pursuing overseas projects with the support of national strategies to reach international markets that help them expand their operations outside the country

One of Del Mar Energy's core businesses is mining, which has been a key driver of the company's growth and improvement

DEL MAR ENERGY

▶ carries out integrated development of mineral deposits: from geological exploration of territories to creation of a full production cycle for extraction and processing of resources

DEL MAR ENERGY

primary mission is to bring innovative technologies and best practices to the mining industry, resulting in significant productivity improvements and significant cost reductions

With more than **20 years** of experience in the industry, the company has highly qualified specialists and actively applies advanced developments of its own scientific and technical centers. These advantages make Del Mar Energy a leader among its peers in the United States

Mineral deposit development is a set of interrelated mining processes aimed at extracting minerals or their components from the subsurface of the earth or from its surface

The process starts with a **preparatory stage**, including surface water diversion, removal of natural and artificial barriers, and dewatering of the quarry

The **second stage**, the operational stage, involves stripping the field to provide cargo transportation access to various sections of the field. This is achieved by carrying out capital mine workings to organize preparatory work

In the case of open-pit **mining**, capital excavations include opening inclined trenches and underground workings, while preparatory excavations include cut trenches and excavations

THE THIRD STAGE OF FIELD EXPLOITATION

is the direct **development of minerals**, i.e. their extraction from the bowels of the earth after the deposit has been opened. Depending on the conditions, extraction is carried out by various methods: **open pit, underground, borehole, underwater or combined**

In the **open-pit method**, mining is carried out by means of cut trenches (pits) through the opening workings,

as well as by selecting minerals and waste rock from the preparatory and cleaning workings
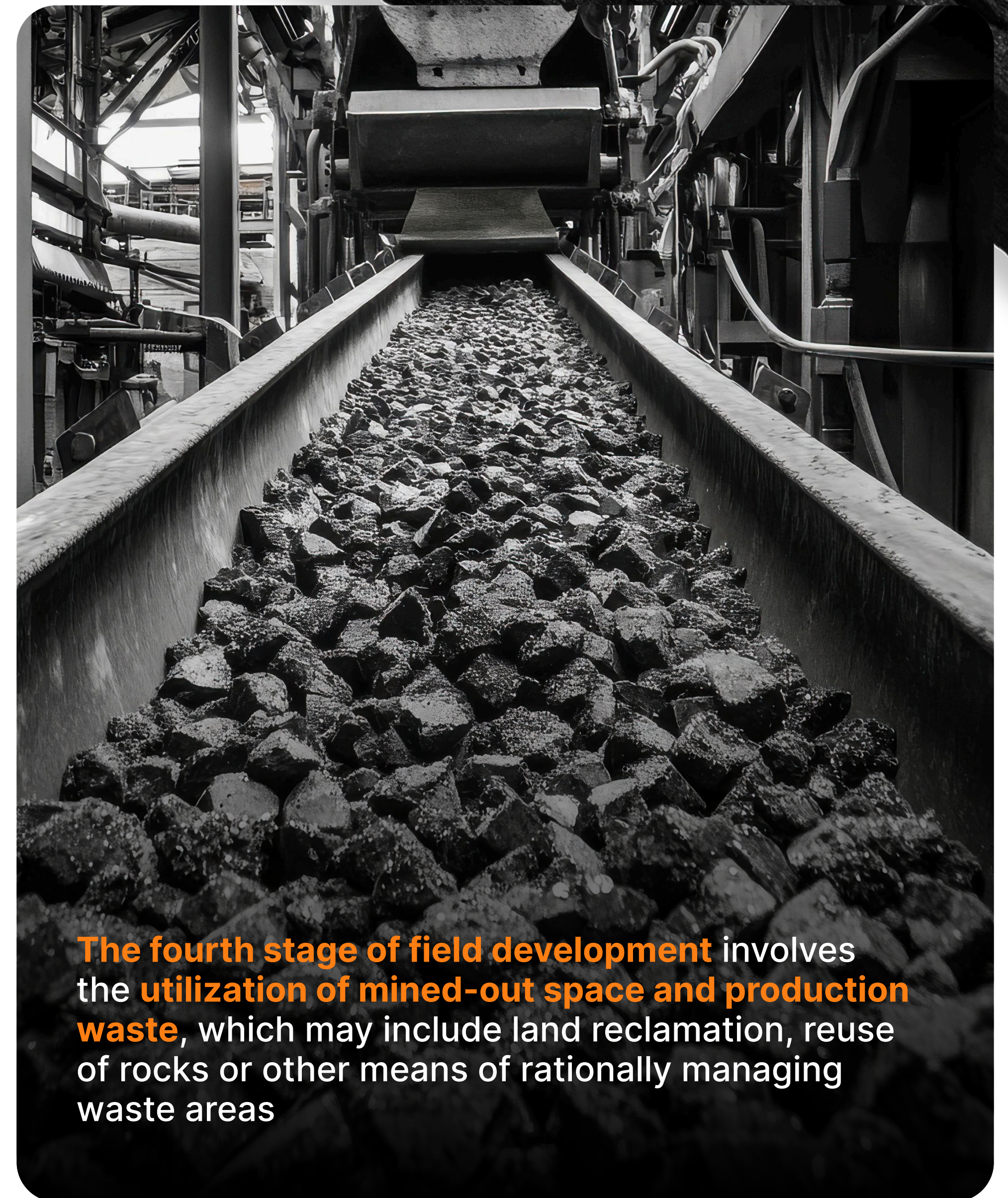
The fourth stage of field development involves the **utilization of mined-out space and production waste**, which may include land reclamation, reuse of rocks or other means of rationally managing waste areas

In the process of **underground** mining, there are four main stages of mining operations:

▶ Mineral Exploration

▶ Deposit stripping

▶ Preparing for excavation

▶ Clearing Excavation

The main processes of underground mining operations include:

▶ Drilling

▶ Roof fastening

▶ Shipping

▶ Underground pumping

▶ Climbing to the surface

▶ Other technological operations

At the beginning of the 21st century, annual mineral production worldwide exceeded 20 billion tons of solid minerals, about 3 billion tons of oil, and approximately 1,000 billion cubic meters of natural gas

The global mining industry is growing steadily at 4-5% per year, with mining output doubling every 15-18 years

In value terms, the development of energy raw materials accounts for 72% of total investment, ore mining for 21%, and non-metallic minerals account for 7%

THE WORLD'S OPEN-PIT MINES:

▶ About 60% of metal ores

▶ 85% non-metallic ores

▶ 100% of non-metallic minerals

▶ About 35% coal

Underground development is used for deposits located at significant depths where the open pit method is not economically or technically feasible

CHARACTERISTIC FEATURES OF SOLID MINERALS DEVELOPMENT:

Construction of high-capacity mining operations, including quarries with an annual capacity of tens of millions of tons and mines/mines with production of several million tons

Development of deposits with low content of useful components, which requires the use of modern enrichment technologies

Integrated utilization of minerals, including overburden processing for the construction industry

A shift to mining from great depths, reaching hundreds of meters for open pits and several kilometers for mines

Introduction of cyclic-flow and flow schemes of mining operations based on integrated mechanization and automation

Improvement of labor and safety conditions, as well as reclamation of land and subsoil disturbed by mining operations

The oil and gas production process includes several key stages: field exploration, well drilling, hydrocarbon recovery, transportation and processing. In today's environment, an important role is played by the introduction of advanced technologies to increase recoverable reserves and improve the profitability of production

INTRODUCTION OF NEW METHODS OF IMPACT ON PRODUCTIVE FORMATIONS

- A productive reservoir is a geological formation containing oil or gas. During field development, the natural pressure in the reservoir decreases, making it difficult to recover hydrocarbons
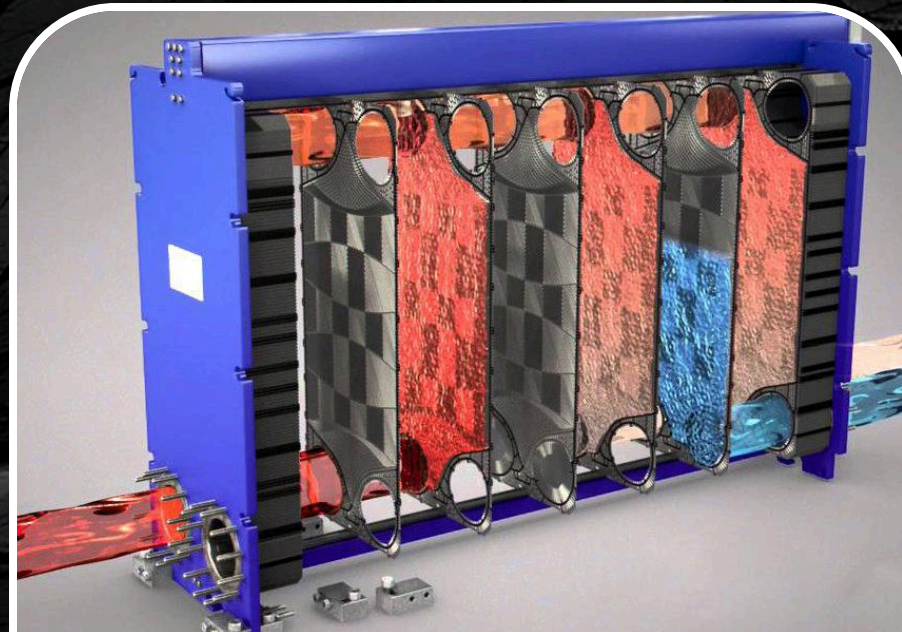
# VARIOUS STIMULATION TECHNIQUES ARE USED TO INCREASE RECOVERY RATES:

Hydraulic fracturing (fracking) is the injection of fluid at high pressure to create fractures in the rock through which oil and gas can flow more easily into the well
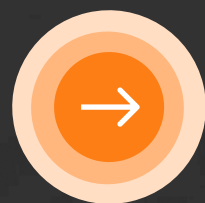
Water or gas injection (secondary methods) - maintaining reservoir pressure by injecting water, carbon dioxide or natural gas

Thermal effects (steam-thermal methods) - used in heavy oil production, for example, by injecting superheated steam to liquefy the oil
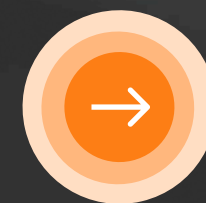
Chemical methods - introduction of reagents that alter the properties of oil and rock to facilitate production (e.g., polymer or alkaline flooding)

Microbiological methods (MUND) - the use of microorganisms that degrade hydrocarbons, improving their mobility

USE OF AUTOMATED EXTRACTION SYSTEMS

Modern oil and gas production requires a high degree of automation, which allows:

Optimize production

- automatic control systems regulate pressure, fluid delivery and other well performance parameters in real time

Increase safety

- remote control and monitoring prevent accidents and minimize human error

Reduce costs

- automated systems can reduce personnel costs and improve equipment efficiency

BASIC AUTOMATION TECHNOLOGIES IN THE OIL AND GAS INDUSTRY:

INTELLIGENT (SMART) WELLS

equipped with sensors and adjustable valves to control production without physical intervention

DIGITAL FIELD DOUBLES

are computer models that simulate field operations and allow prediction of reservoir behavior

REMOTE PRODUCTION CONTROL

allows operators to control well and platform operations from central control rooms

ROBOTIC

drilling rigs are autonomous drilling systems that reduce drilling time and improve accuracy

INTERNET OF THINGS (IOT) AND ARTIFICIAL INTELLIGENCE (AI)

analyze sensor data to predict equipment failures, manage well performance and improve production efficiency

Modern methods of impact on productive formations and production automation allow us to increase the profitability of field development, minimize risks and reduce environmental impact

Regardless of the state of the economy, people always have **basic needs** that need to be met. The foundation for the production of any goods is **natural resources and minerals**, the processing of which produces products that are in demand in various industries

Mining has been around since ancient times, and therefore **investments in this sector remain one of the most stable and promising**. The global economy constantly needs more natural resources, which makes the industry less vulnerable even in times of economic crisis

One of the key factors confirming the **prospects of investing** in resource industries is the **growth of global production**. Production capacity around the world is increasing every year, leading to higher demand for raw materials

According to the reports of the British consulting company **CEBR**, by the end of **2022, the volume of global production for the first time in the history of mankind exceeded**

100 TRILLION DOLLARS

which emphasizes the importance and long-term sustainability of investment in natural resources

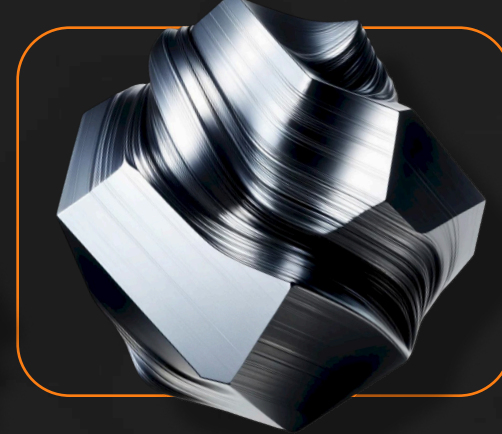# PROSPECTIVITY OF INVESTMENTS IN NATURAL RESOURCE EXTRACTION

CONSTANT DEMAND

Natural resources are the basis for the production of virtually all goods and are also essential for building and maintaining global infrastructure

wood   steel   gravel

and other materials are used not only in the construction of new facilities, but also in the repair of existing ones. With **accelerated urbanization**, the need for these resources **is constantly growing and requires regular replenishment.**

A RELIABLE TOOL FOR CAPITAL PRESERVATION

Some natural resources, such as **gold and other precious metals**, are traditionally considered to be **protective assets** that can **shield capital from inflation**. However, despite their resilience, **cyclical crises of overproduction can** occur in certain segments, affecting prices

LOW DEPENDENCE ON FINANCIAL MARKETS

Investments in **natural resources** have a **weak correlation with the financial sector**, which makes them attractive even during economic crises. Many companies retain investments in this segment, counting on the **growth in the value of raw materials when the economy recovers**

DIVERSITY OF INVESTMENT OPPORTUNITIES

Investing in the mining sector is possible in a number of ways, including:

- Direct investment in greenfield development or an existing business

- Buying stocks and bonds of commodity companies

- Investing in units and exchange traded funds (ETFs) focused on resource extraction

- Trading in derivative instruments (futures, options), which allows to hedge risks and make money on changes in commodity prices

ADDITIONAL BENEFITS OF INVESTING IN MINING OPERATIONS

POPULATION INCOME GROWTH AS A DEMAND FACTOR

As incomes rise in developing countries, the consumption of raw materials increases. This is particularly noticeable in the construction, jewelry and industrial equipment sectors, making investments in natural resources more promising for the long term

RAW MATERIALS AS A STRATEGIC ASSET OF STATES

Natural resources are a key element of economic stability and security. Many countries purchase large quantities for political or strategic reasons, creating additional demand for commodities. In such cases, governments themselves become active players in the market, which can have a positive impact on prices and the investment attractiveness of the industry

Prospectivity for long-term investments

Natural resources are a **convenient tool for long-term investment**, as their value is largely determined by **global economic trends**. Private investors can analyze forecasts and choose those markets that **will be in demand in the coming years**, providing a stable income

It should be taken into account that **investing in a large number of different natural resources at once may not always be profitable**, as **some segments may show opposite trends to** the general market trend

Stability and low volatility

The natural resources market is characterized by **high inertia**, which means that it **reacts smoothly** to changes in supply and demand. Unlike other sectors where fluctuations can be sharp, in the extractive industry **it is impossible to instantly increase or reduce production volumes**, which reduces the likelihood of sudden collapses or price spikes

ADVANTAGES OF THE NATURAL RESOURCE MARKET
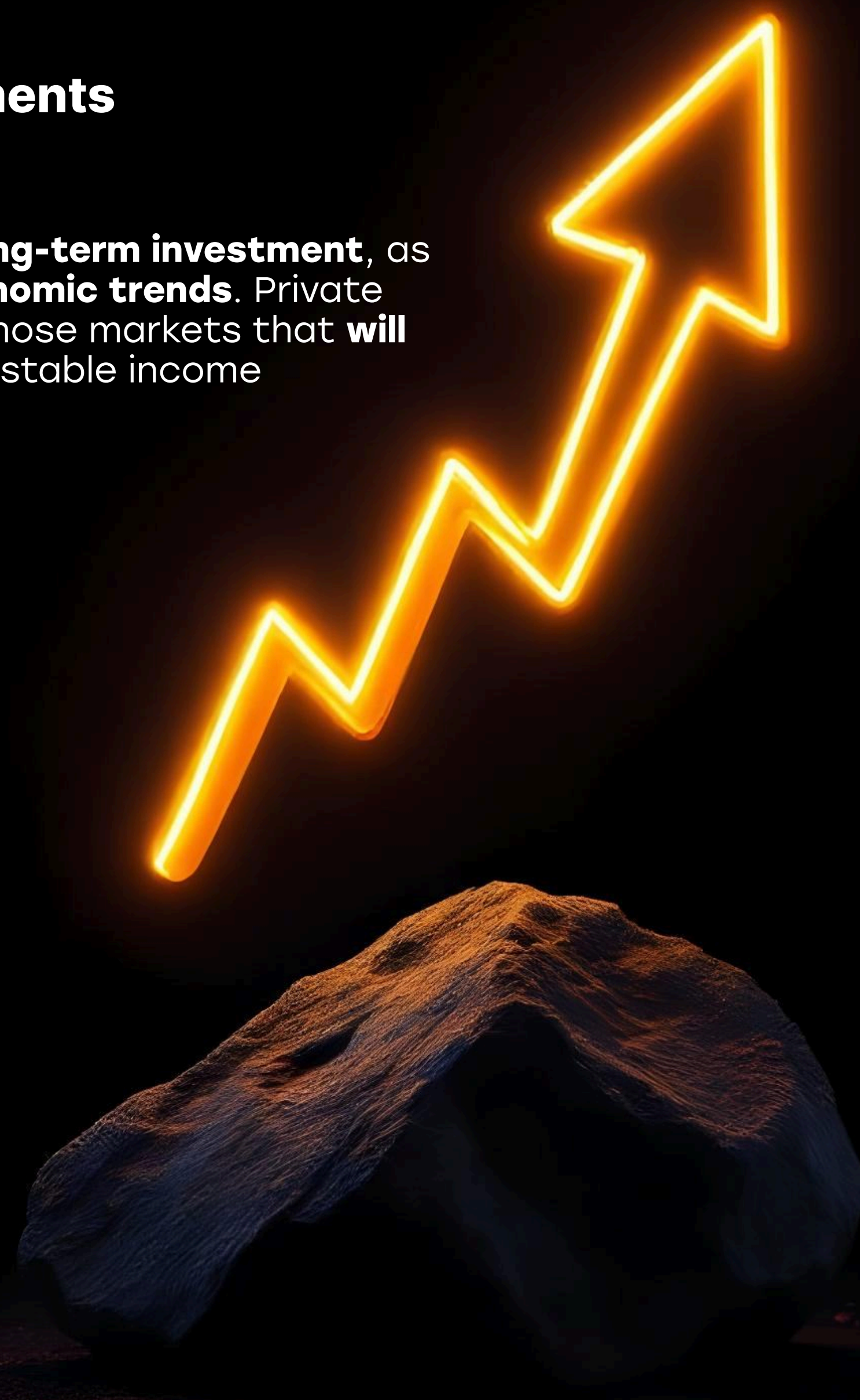
MAIN RISKS OF INVESTING IN NATURAL RESOURCE EXTRACTION AND WAYS TO MINIMIZE THEM
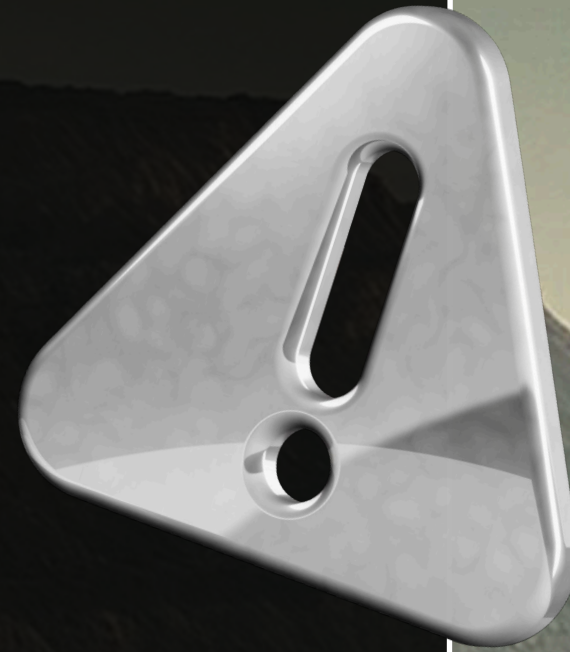
Volatility of raw material prices

Natural resource prices depend on a variety of factors: the global economy, supply and demand, geopolitical situation and currency fluctuations. For example, a drop in oil prices in 2014 or fluctuations in metal prices can significantly affect the profitability of projects

Risk mitigation methods:

▶ **Hedging with derivatives** (futures, options) allows you to fix the price of resources and avoid losses in market fluctuations

▶ **Asset diversification** - investing in different types of resources (e.g. oil, metals, rare earth elements) reduces dependence on one segment

▶ **Market Cycle Analysis** - Understanding long-term trends allows investors and companies to adjust strategy

POLITICAL AND GEOPOLITICAL RISKS

Many resource-rich regions are subject to political instability, nationalization of extractive assets, sanctions and trade restrictions. For example, sanctions against Venezuela and Russia have affected the global oil and gas market

RISK MITIGATION METHODS:

Choosing stable jurisdictions - investing in countries with a reliable legal system reduces the threat of expropriation

Entering into long-term contracts with governments - this helps to lock in working conditions

Asset allocation across different regions - reduces dependence on political decisions in one country

ENVIRONMENTAL AND CLIMATE RISKS

The extraction of natural resources is associated with environmental issues that can lead to fines, restrictions or even plant closures. Climate change also affects logistics and mining operations (thawing permafrost, hurricanes, droughts)

RISK MITIGATION METHODS:

Introduction of sustainable development technologies - reduction of harmful emissions, waste recycling, land reclamation

Adherence to international environmental standards - this helps to avoid sanctions and litigation

Natural catastrophe insurance - protection against losses due to natural disasters

RISKS OF FIELD DEPLETION

The reserves of natural resources are finite, and the development of new deposits requires time and large investments. Reducing the content of useful components makes mining less profitable

RISK MITIGATION METHODS:

▶ **Investing in exploration and development of new fields**

▶ **Optimization of mining technologies to increase mineral recovery rates**

▶ **Switching to recycling of secondary resources (e.g. recycling metals from old machinery)**

INVESTMENT OPPORTUNITY

By opening a deposit for the minimum allowed amount of $300,000, after 195 days you will have

$1,130,220 in your balance

Deposit period: 195 days

ROI: 376.74%

DEL MAR ENERGY INC.

▶ is an american holding company primarily focused on the extraction, processing, and sale of oil

▶ The company also engages in electricity production and distribution; manufacturing, repairing, and leasing electromechanical equipment; designing and constructing wind, solar, and geothermal power plants; extracting coal and gas; and developing oil and gas infrastructure

Having started out with just a few oil rigs in 2002, we began developing and manufacturing with our own technologies in 2012

today
91%

of our products are exported to more than 40 countries worldwide