



GEODYN
SOLUTIONS

**\$250 MILLION
INVESTMENT IN
ORGANIC RARE
EARTH MINING IN THE
DOMINICAN REPUBLIC**

www.geodynsolutions.com

EXECUTIVE SUMMARY





Geodyn Solutions proposes a \$250 million investment to develop a sustainable rare earth element (REE) mining project in the Sierra de Bahoruco, Pedernales Province, Dominican Republic. This project will utilize cutting-edge organic mining technologies, ensuring minimal environmental impact while maximizing economic returns. Additionally, the project includes a \$50 million investment in a 30 MW mobile power generation system utilizing Organic Rankine Cycle (ORC) power units to provide reliable, sustainable energy for mining operations. A \$30 million contingent fee is allocated to address unforeseen costs, ensuring project resilience and operational flexibility. This investment aligns with global trends in clean energy and critical mineral independence, providing a high return on investment (ROI) and establishing Geodyn Solutions as a leader in responsible rare earth extraction.

INVESTMENT OVERVIEW

TOTAL INVESTMENT

\$250 million (including \$50 million for power generation and \$30 million contingency fund)

PROJECT DURATION

10 years (5 years of peak production)

MINEABLE RESERVE ESTIMATE

100 million tons of rare earth-bearing material

TECHNOLOGY

Organic leaching, bio-mining, microbial-assisted extraction

ANNUAL PRODUCTION TARGET

15,000 metric tons of REO (Rare Earth Oxides)

TARGET ELEMENTS

Neodymium, Praseodymium, Dysprosium, Terbium
(essential for EVs, wind turbines, and electronics)

POWER SUPPLY

30 MW mobile power generator with ORC power units



CAPITAL EXPENDITURE

(CAPEX)

EXPLORATION & GEOLOGICAL SURVEYS
\$20 MILLION

MINING EQUIPMENT & ORGANIC PROCESSING PLANT
\$80 MILLION

INFRASTRUCTURE (ROADS, POWER, WATER)
\$40 MILLION

RESEARCH & DEVELOPMENT FOR SUSTAINABLE EXTRACTION
\$20 MILLION

REGULATORY COMPLIANCE & LICENSING
\$10 MILLION

ENVIRONMENTAL PROTECTION & REFORESTATION PROGRAMS
\$10 MILLION

30 MW MOBILE POWER GENERATOR WITH ORC UNITS
\$50 MILLION

CONTINGENT FEE FOR UNFORESEEN COSTS
\$30 MILLION

TOTAL CAPEX
\$250 MILLION



OPERATIONAL COSTS (OPEX) & REVENUE PROJECTIONS

ANNUAL OPEX

\$70 MILLION (INCLUSIVE OF LABOR, ENERGY, LOGISTICS, MAINTENANCE, AND ENVIRONMENTAL PROTECTION)

AVERAGE RARE EARTH OXIDE PRICE

\$10,000 PER METRIC TON

ANNUAL REVENUE

\$150 MILLION (15,000 METRIC TONS X \$10,000/TON)

PROJECTED ROI

18-20% PER ANNUM

PAYBACK PERIOD

5-6 YEARS

10-YEAR NET PROFIT PROJECTION

\$900 MILLION



JOB CREATION & SOCIOECONOMIC IMPACT

DIRECT JOBS CREATED:

1,500 (ENGINEERS, GEOLOGISTS, PLANT OPERATORS, ENVIRONMENTAL SCIENTISTS, LOGISTICS PERSONNEL)

INDIRECT JOBS CREATED:

5,000 (SUPPLY CHAIN, LOCAL BUSINESSES, SERVICES, LOGISTICS)

TRAINING & UPSKILLING

PROGRAMS: PARTNERSHIP WITH LOCAL UNIVERSITIES FOR WORKFORCE DEVELOPMENT

COMMUNITY INVESTMENT:

\$5 MILLION ALLOCATED FOR EDUCATION, HEALTHCARE, AND CLEAN WATER PROJECTS



POWER SUPPLY & SUSTAINABILITY STRATEGY

30 MW MOBILE POWER GENERATOR WITH ORC TECHNOLOGY

- Provides efficient, reliable, and mobile power to support mining and processing operations.
- Uses **Organic Rankine Cycle (ORC) units**, improving energy efficiency and reducing carbon footprint.
- Ensures **continuous power supply**, reducing dependence on external power sources.

RENEWABLE & HYBRID ENERGY INTEGRATION

- **Solar & Wind Feasibility Study** to further offset energy costs and environmental impact.
- **Battery Storage Systems** to enhance energy security and efficiency.

ENERGY EFFICIENCY MEASURES

- Use of **high-efficiency electric mining equipment**.
- Adoption of **smart-grid technologies** to optimize energy use.
- Water recycling and **low-energy bio-mining technologies**.

ENVIRONMENTAL BENEFITS & SUSTAINABILITY MEASURES



ORGANIC & ECO-FRIENDLY MINING TECHNIQUES

- Use of bio-leaching microbes to extract REEs with minimal chemical impact.
- Avoidance of toxic reagents like sulfuric acid and cyanide.
- Reduced water usage through closed-loop water recycling systems.

REFORESTATION & LAND RESTORATION

- Active restoration of mined areas with native tree species.
- Carbon sequestration programs to offset emissions.

WASTE MANAGEMENT & CIRCULAR ECONOMY

- Recycling of process tailings for secondary mineral recovery.
- Safe disposal and management of residual materials.



STRATEGIC PARTNERSHIPS & GOVERNMENT ENGAGEMENT

- Collaboration with the Dominican Republic's National Mining Firm to streamline permits and operations.
- Engagement with global tech manufacturers for offtake agreements (EVs, wind energy, and semiconductors).
- Partnerships with international organizations for green certification and investment grants.



This investment will establish Geodyn Solutions as a pioneer in sustainable rare earth mining, tapping into one of the most promising untapped REE reserves in the Western Hemisphere. By using organic and eco-friendly extraction methods, the project ensures long-term environmental responsibility while achieving strong financial returns and strategic market positioning.



NEXT STEPS

- 1. CONDUCT FEASIBILITY STUDY AND FINALIZE ENVIRONMENTAL IMPACT ASSESSMENTS.**
- 2. SECURE NECESSARY PERMITS AND GOVERNMENT APPROVALS.**
- 3. BEGIN PHASED DEVELOPMENT WITH EXPLORATION AND INFRASTRUCTURE SETUP.**
- 4. ESTABLISH INITIAL PILOT PRODUCTION AND EXPAND TO FULL-SCALE OPERATIONS WITHIN THREE YEARS.**

Geodyn Solutions is poised to lead the next generation of responsible rare earth mining.



www.geodynsolutions.com

©Geodynsolutions 2025 - All Rights Reserved