

Project Outline

Gold and rare
earth mining
company

PDAC 2024

A brief mention of our company

GREEN MINING S.R.L. is an Argentine-Italian holding company set up to carry out exploration, exploitation and mining commercialization projects and provision of consultancy services, made up of an interdisciplinary team of professionals.

**We are a group of
technicians developing
innovative industrial
technologies.**

Meet our team



-  **↓**
José E. Garcia
Business Economist & Financial Manager
-  **↓**
Leopoldo C. Rodriguez
Geophysicist, Mining & Groundwater Hydrogeology expert
-  **↓**
Ghirelli Edoardo
Geologist, Geoscientist for Environmental Sustainability
-  **↓**
Casarci Maurizio
Chemist, Senior Scientist in Environmental Technology & Separation Techniques
-  **↓**
Zarlenga Francesco
Geologist, Mining, Mineralogy, Petrography & Environment expert
-  **↓**
Ghirelli Sauro
Surveyor, Mining expert
-  **↓**
Pignatelli Vito
Chemist, Bioenergy & Biotechnology process expert
-  **↓**
Romani Nazzareno
Geologist, Environmental Geology & Geotechnics expert
-  **↓**
Pescatore Donato
Nuclear Engineer
-  **↓**
Martinez Cano Luis Sebastian
Natural Resources Environmental Management Specialist
-  **↓**
Marcelo Nicolás Segura Rodriguez
Natural Resources Environmental specialist
-  **↓**
Gonella Marco
Civil Engineer Ph.D. in Environmental Science

Purposes, competencies and core policies

Our purpose



Green Mining is a diversified and integrated company operating in the precious metals industry. We believe that in business, innovation combined with ambition makes a difference in people's lives and in the protection of our natural world, resulting in benefits for all.

Our strengths



Our management team has experience significant in the mining industry.

We are a company conscious of social responsibility and environmental responsibility, committed to the sustainable development of the places in which we operate.

Green mining values



Innovation



We continuously search for technical and management solutions that improve our products and business processes



Entrepreneurship



We can sustain and grow our business by identifying opportunities for Innovation.



Trust



We build trust with our employees, partners and investors in our working relationship by being open to social development.



Sustainability



We ensure that every initiative and investment has a strong orientation towards economic, social and environmental sustainability.



Personal commitment



We expect each of our employees to make their own individual contribution to our business.



Local Integration



All our projects are closely integrated with our territory.

Key points of the project

The potential of the deposit



The deposit is geologically defined as a “**multi-metallic**” deposit, since, through the prospecting and geological sampling campaign carried out over the last two years, international geochemical laboratories have certified the presence of significant commercially interesting quantities of **Critical Raw Materials**.

Sustainable extraction



At this advance exploration stage of the deposit has already designed a pilot plant that will enable the production of gold and rare earth concentrates on a fully sustainable basis, **free of chemicals**. The footprint of the mine will be to extract the minerals exclusively by physical means, using a technological circuit that exploits exclusively the minerals’ **natural specific weight** and **magnetic properties** to separate them from the by-product elements.

Rare earth refining plant



Green Mining disposes of the technical know-how for the **industrialization** of a demonstration refining prototype plant **already tested** in Italy, characterized by an **all-Italian hydrometallurgical technology** that reduces and controls the environmental impact by producing rare-earth products with a high purity ranging from **99.9% to 99.99%**.

The “Aluvion Royo I” concession

Concession

1055R1997

Lat:-29,9192

Lon:-68,8494>

Our concession is located in the centre of the extensive **Huachi mining area of 1300 hectares**, in the Cordillera Preandina area, in the region of San Juan, Argentina. Numerous geological studies and scientific evidence prove that the area is highly mineralized with **gold, silver, copper** and **Rare Earth Elements (REE)**.



The San Juan region: mining potential

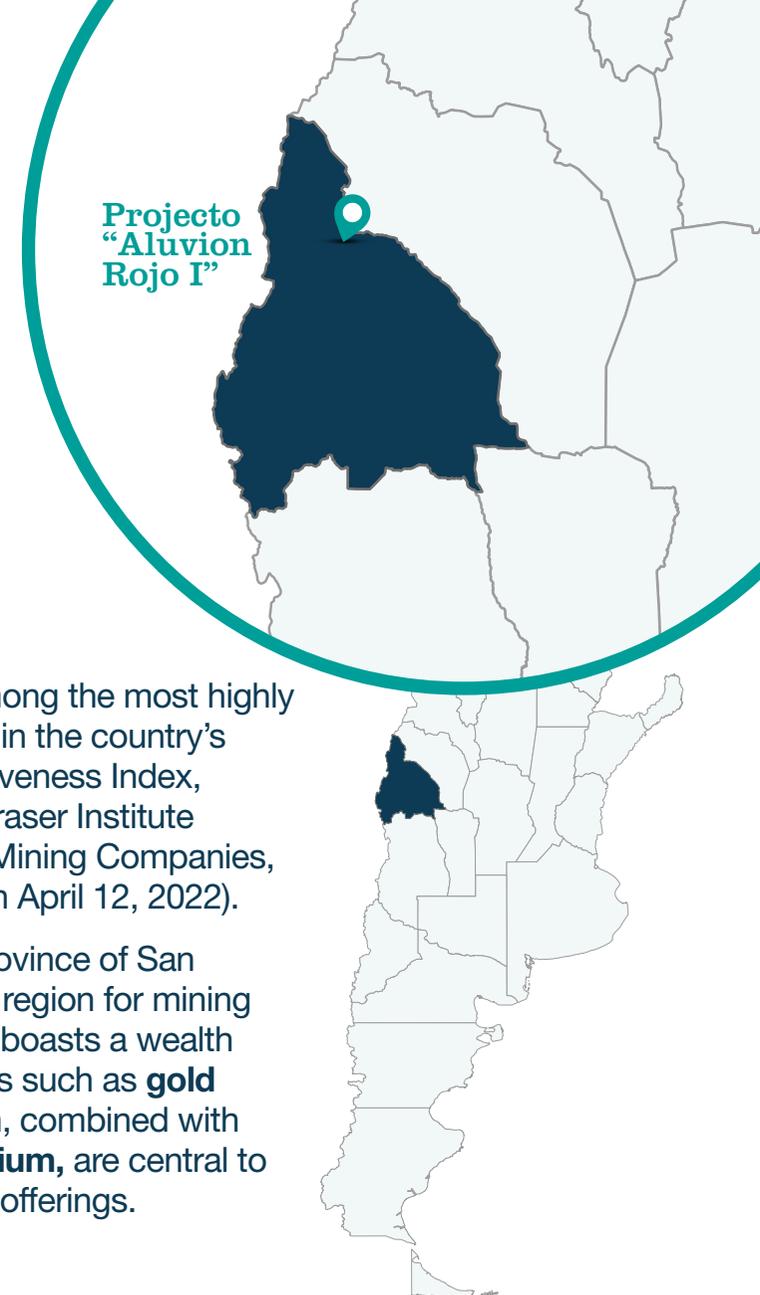
San Juan, the province with the **greatest potential** for the development of **mining activity** is **leading** the country's exploration activity. The province's territory concentrates **50% of Argentina's mining potential**.

Today, **San Juan** follows a model where it seeks to create **sustainable mining**, a mining with **society**, a mining where mineral resources **are granted** to mining them.

[Link](#)

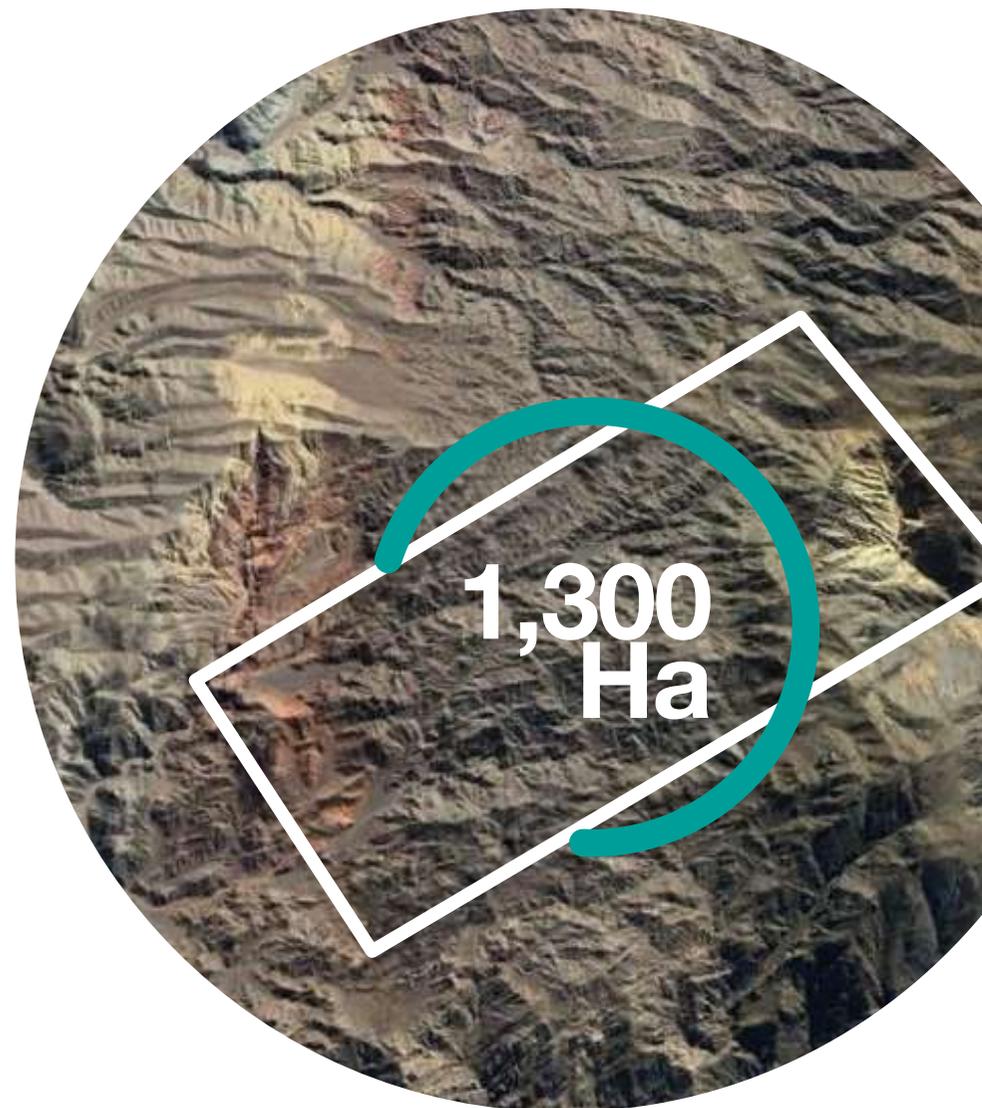
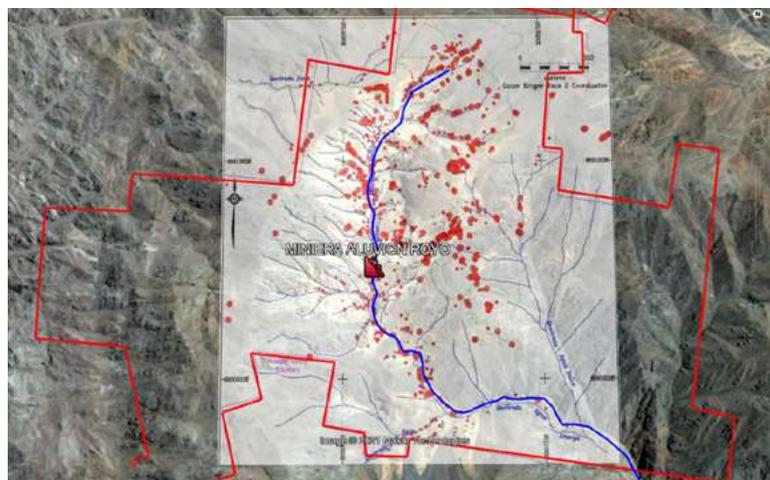
San Juan leads among the most highly positioned regions in the country's Investment Attractiveness Index, published by the Fraser Institute (Annual Survey of Mining Companies, 2021- Published on April 12, 2022).

In particular, the province of San Juan is a preferred region for mining development, as it boasts a wealth of valuable minerals such as **gold and copper**, which, combined with the potential of **lithium**, are central to Argentina's mining offerings.



Mining District N°5

Currently, the “Aluvion Royo I” concession **can be extended** as **we have obtained priority status** for the exploitation of adjacent concessions totaling **1,300 hectares**, using the same logistical and production facilities for the exploitation of the deposits.



Gold Values in Rock

- <26 ppb Au
- 26 - 99 ppb Au
- 100 - 500 ppb Au
- >500 ppb Au

Huachi Property Rock Geochemistry Gold Values

The potential of the deposit

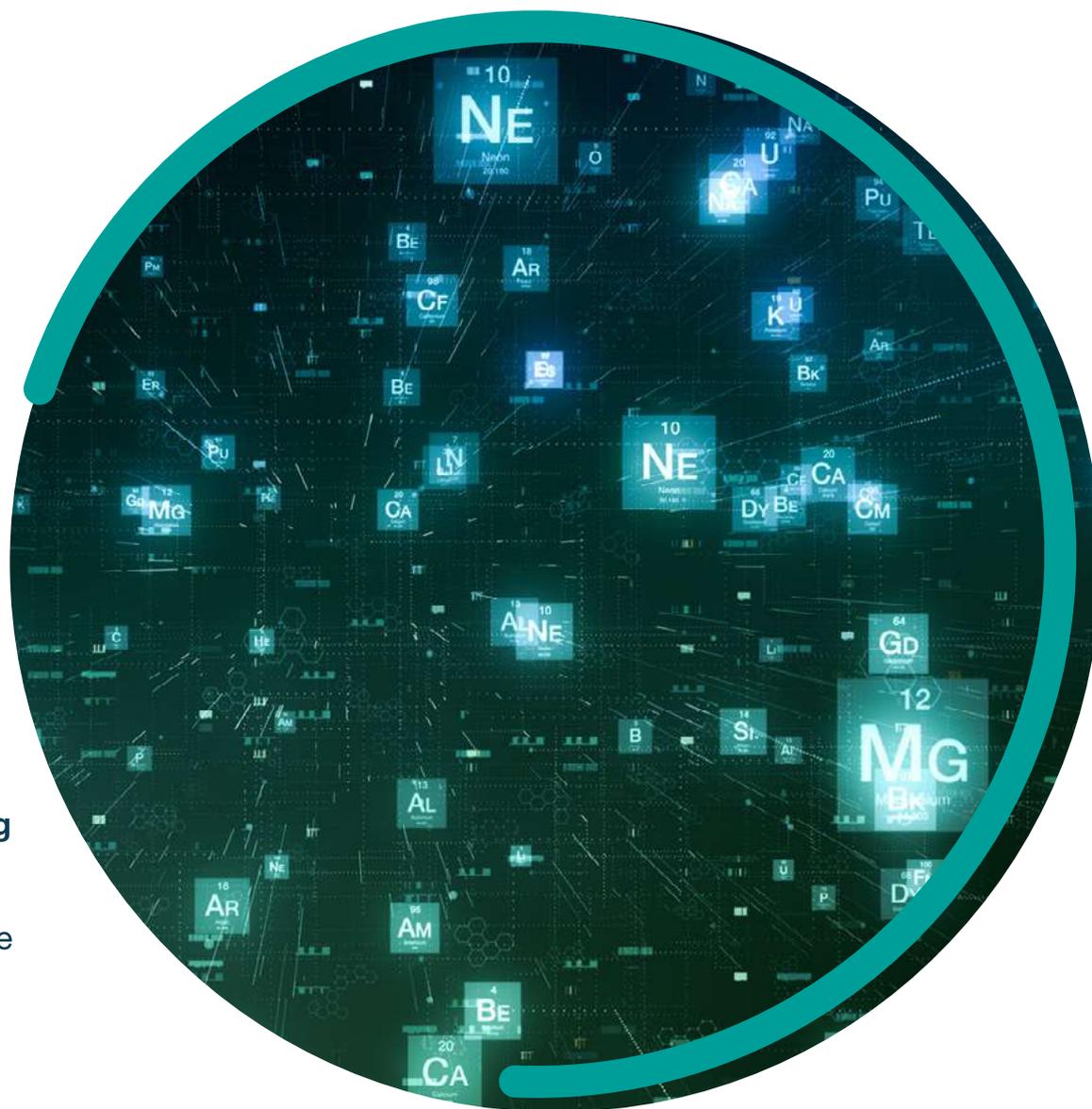
The concession is located at the apex of a hydrographic basin, an area surrounded by highly mineralized hydrothermal deposits with metalliferous veins. The deposit is geologically defined as a “**multi-metallic**” deposit, since, through the **prospecting** and **geological sampling campaign** carried out over the last two years, international geochemical laboratories have certified the presence of significant commercially interesting quantities of **Critical Raw Materials**, such as:

Precious elements

[Au, Ag, Pt, Pd]

Rare earth Elements (REE)

[Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sm, Tb, Th, Tm, Y, Yb, Sc]



Production chain: **socially acceptable and ecologically effective**

1



Unlike classic projects for the direct extraction of gold, silver and various metals from rock, interest is based on the particularity of the “Aluvion Royo I” project which consists of sediments generated by the action of morphological disintegration caused by atmospheric agents (rain, snow, frost) present in the area; it therefore refers to the **classification of metalliferous sediments** contained in the sedimentary deposits of the valley floor. The extraction process has been defined as **strategic**, as it makes it possible to exploit the natural physical and magnetic concentration of the minerals, separating the particles according to their natural properties, **using exclusively physical methods**. The exploration phase of the deposit was completed with in-depth geological studies of the mining area to develop a comprehensive plan for the responsible and sustainable management of the project, in order to optimize and valorize the natural capital available to Green Mining.

2



This, consequently, makes it possible to extract Rare Earths and precious minerals **without the use of chemical agents**, which are highly harmful to both the environment and human beings, and at the same time allows environmental conservation to be monitored from the very first excavation operations. This operational strategy gives the production circuit **an innovative socially acceptable and ecologically effective footprint**, in accordance with the internationally evaluated high standards of mining sustainability for the supply of critical raw materials. It should be noted that the company has been immediately open to **collaborating with the local community** in the area, committing to involving it in the sampling and prospecting operations of the deposit in collaboration with teams of external mining consultants and university academic expertise.

“Aluvion Royo I”: Prospecting & Sampling

The deposit is geologically defined as a “**multi-metallic**” deposit, since, through the **prospecting** and **geological sampling campaign** carried out over the last two years, international geochemical laboratories have certified the presence of significant commercially interesting quantities of **Critical Raw Materials**.



↓
Georeferenced
sampling plan



↓
Deposit of
mineralized sediments



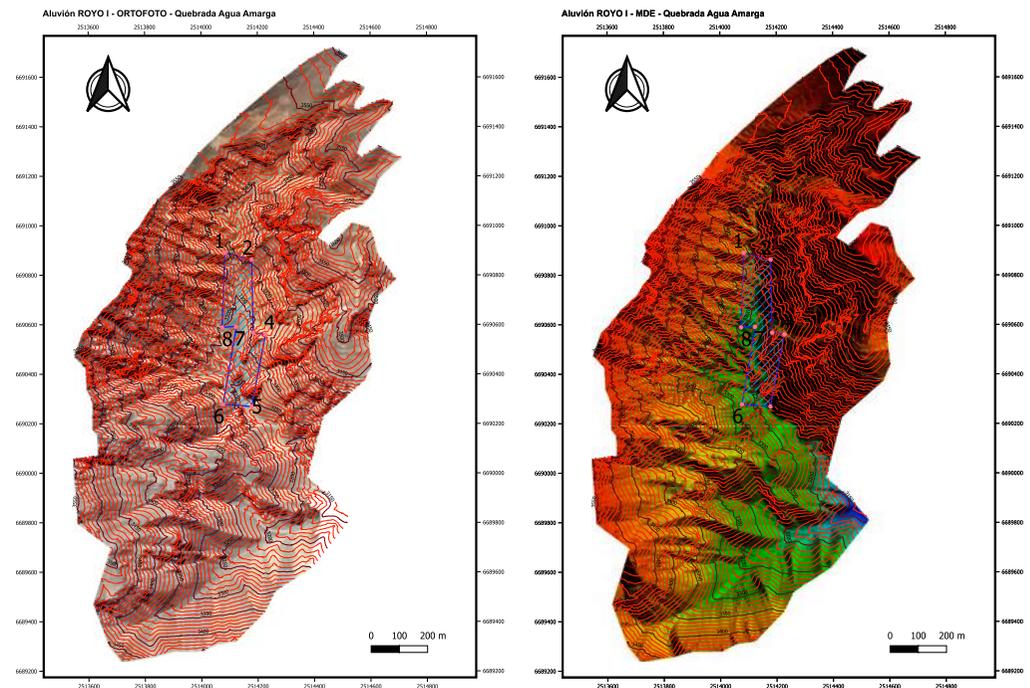
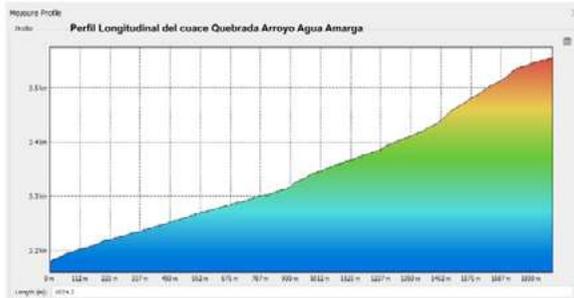
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Local Community
Involvement

“Aluvion Royo I”: Digital Elevation Model (DEM)



Orthophotomosaic of the deposit, photogrammetric DEM with DENSA point cloud - DEM of elevations - 3D TIN surface - contour lines, longitudinal and transversal profiles.

VISTA Perspectiva 3D MDE - Quebrada Arroyo Agua Amarga



Visit our deposit 
<https://youtu.be/Ua3oukUyqCc>
https://youtu.be/_A869BQ6JTg

“Aluvion Royo I”: Exploration & analysis

Precious Metals	[gr/ton]
Au	2,13
Ag	3,56
Pt	1,10
Pd	0,90

Minor Metals	[gr/ton]
Ga	17,15
In	0,36
Te	1,81
Ge	0,10
Se	4,67

Metals	[gr/ton]
Fe	110,00
Ti	3,56
Co	23,90
Hf	0,40
Ta	0,13
Nb	2,23
Zr	11,80
V	235,00
Th	1565,00
U	0,64
Cr	35,60
Cs	3,90
Rb	121,00
Sn	3,12
Sr	272,00
W	5,74
Cd	4,61
Cu	339,00
Li	8,90
Mo	21,00
Ni	14,10
Pb	678,00
Zn	1055,00

Rare Earth	[gr/ton]
Gd	3,51
La	12,10
Ce	28,20
Pr	3,61
Nd	17,00
Sm	3,82
Eu	1,22
Tb	3,44
Dy	2,64
Ho	0,48
Er	1,39
Tm	0,18
Yb	1,14
Lu	0,15
Y	13,15
Sc	23,60



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www.alsglobal.com/geochemistry

QC CERTIFICATE ME22337110

Project: ALUVION ROYO I

This report is for 13 samples of Soil submitted to our lab in Mendoza, MD, Argentina on 5-DEC-2022.

The following have access to data associated with this certificate:
EDUARDO CHIRELLI DONATO PESCATORE CESAR RODRIGUEZ



LABORATORIO DE ENSAYO ACREDITADO POR EL ORGANISMO DE ACREDITACION INACAL - DA CON REGISTRO N° LE-002

INFORME DE ENSAYO
GQ2300034 Rev. 0

A solicitud de:
Por cuenta de:

SGS ARGENTINA S.A.
Parque Industrial Chimbas Lote 9 - San Juan JS413FES - Argentina
CESAR RODRIGUEZ

Exploration Campaign



Advanced exploration: Trail mining



This concept of **Trial Mining** is used as a technically justifiable **exploration-production tool** as a phase of geological information thickening within the legal status of the local mining law.



Trial Mining represents the phase one of production, i.e. the first step towards full-scale production.



Part of the sampling products, in this case the gold and rare earth metal contents, will be used as values for the **design part** and subsequently **marketed** as they are not sent to the laboratory and not subjected to sample destruction for analysis.



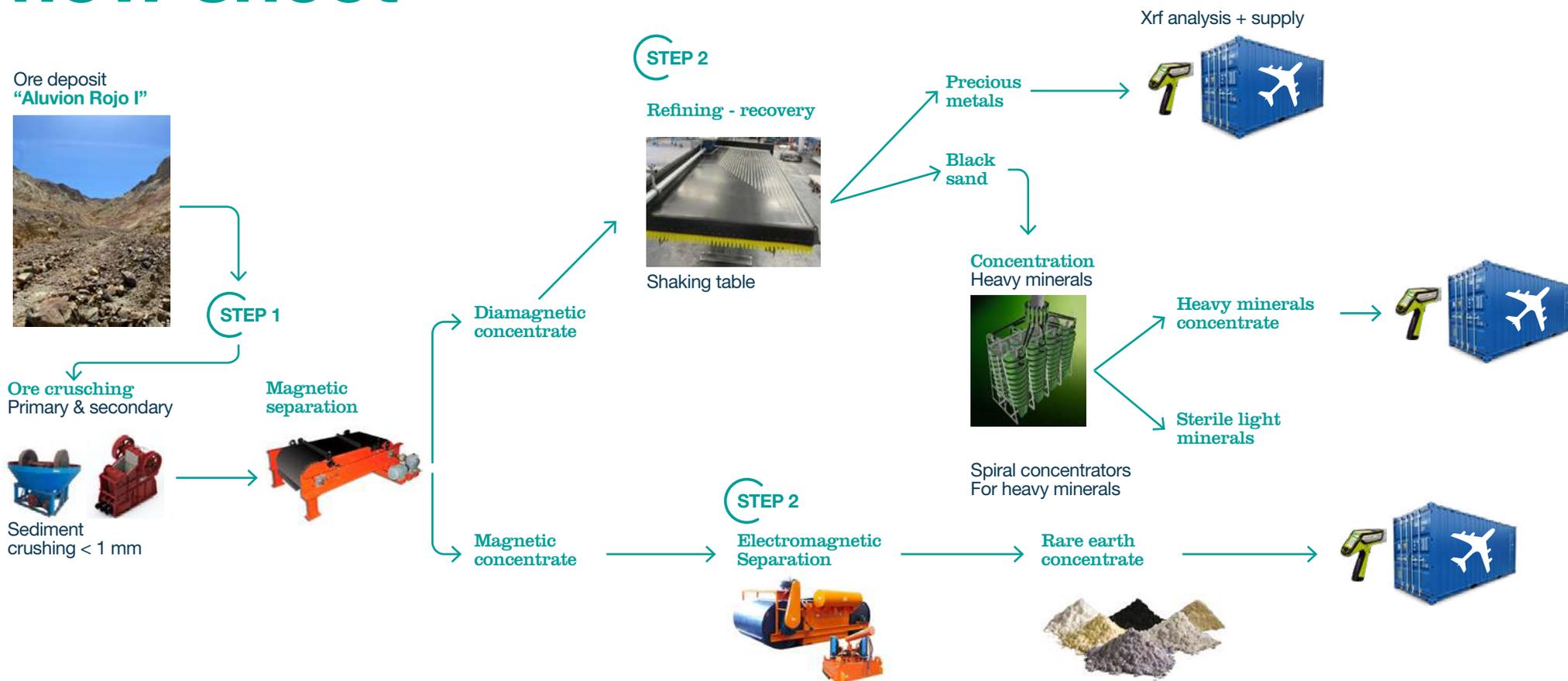
The Trail Mining concept allows us to monitor **environmental conservation** from the earliest operations and, at the same time, will allow the **local community to gradually integrate into the project.**



FINAL RESULT

Excellent way to demonstrate the long-term potential of the mine.

Trial mining: Mineral processing flow sheet



Innovative controlled earth movement

Green Mining is working with the **Seik** company to cooperate in the logistics of transporting materials within the mine.

Cable crane and cable car systems made by Seik protect the environment from major interference.

Such a system applied to the mining environment has many advantages:

- Excellent alternative to conventional means of transportation;
- Low or no CO2 emissions;
- Possibility of energy regeneration;
- Alternative to road construction and modification;
- No seasonal use limitations related to environmental conditions;
- Extremely low maintenance time and cost;



seik-cableway.com

Advanced exploration: Magnetic concentration test



Tests conducted in collaboration with **QLABS** laboratories Canada, Toronto



Reporte N° 33028061 Fecha: 11/09/2023

Cliente: Aluvión Rojo J

Muestra: Muestras procesadas a #60 aproximadamente, según granulometría natural de la muestra.

Descripción de proceso de preparación de muestra.

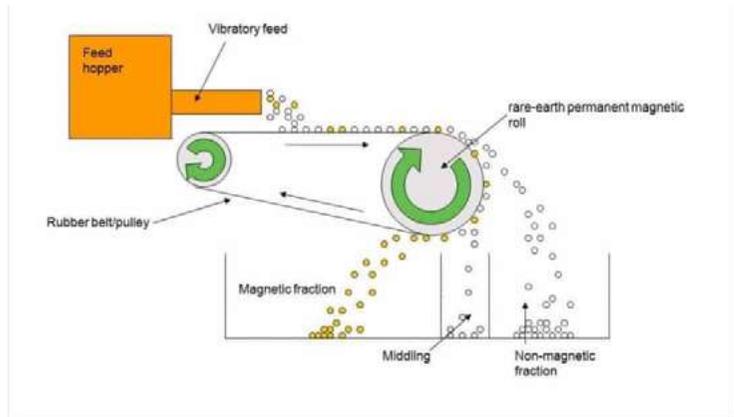
Al mineral entregado por el cliente, procesado a granulometría #60 aproximadamente, se lo homogeneizó 6 veces y se cuarteó en repetidas veces, hasta disminuir la cantidad de muestra con la ayuda de palas de trabajo.

El objetivo de este procesamiento es respetar la homogeneidad de la muestra y una vez finalizado esta primera etapa, poder continuar con el trabajo de homogeneización y cuarteo en cuarteador de rifles.

De este proceso se obtuvo una muestra de 1 Kg aproximadamente de granulometría #60 que es enviada a Laboratorio externo.

A continuación, se detalla el peso de las muestras recibidas.

Muestras	Peso (Kg)
Muestra 1	13
Muestra 2	28,06
Muestra 3	24,4
Muestra 4	17,36
Total	60,8



Obtaining social and environmental license



Dialogue

We build trust with our employees, partners and investors in our working relationship by being open to social development.



Environment

Environmental impact assessment
Green Mining complied with the EIA approved by the government during the exploration phase. Now the government is asking us to move on the production phase.



Transparency

We ensure that every initiative and investment has a strong orientation towards economic, social and environmental sustainability



Community

Social License to Operate (SLO)
Compliance with the social license to involve the local community in the project, sharing the benefits with all stakeholders in the value chain.

Our technological innovation model:

A bridge between Italy & Argentina



From mine to market

The project aims to innovate technologically by developing a **Rare Earth refining plant** that creates a transparent, sustainable, and closed production chain (from mine to market). This approach improves innovation, technological sustainability and economic competitiveness.

Ermes: the italian refining plant



Through an external consulting team of Italian industry professionals, Green Mining disposes of the technical know-how for the industrialization of a demonstration **REE refining prototype plant** already **tested** in Italy.



The high chemical engineering of the Italian plant allows REE to be valorized and refined with high purity from **99.9%** to **99.99%** and at the same time **mitigate** and **reduce** the **environmental impact** to a minimum, in comparison to any other standard REE processing circuit.



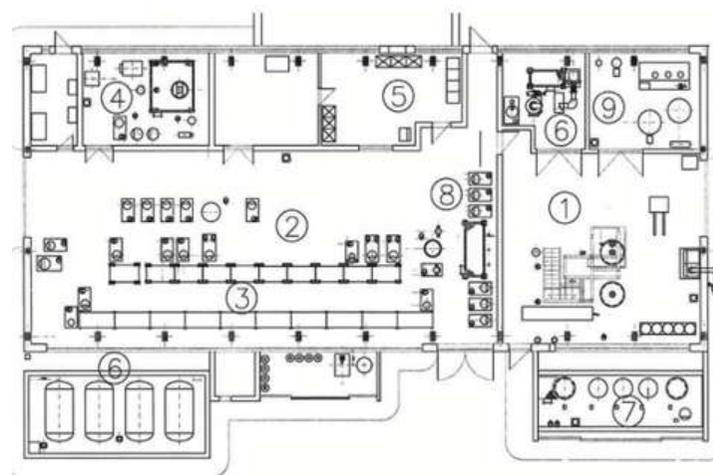
Ermes: the italian refining plant



This is a **hydrometallurgical** pilot plant for the application of metal separation techniques through **solvent extraction** and **chromatography**.



The technology **has already demonstrated** the feasibility of the refining process with excellent results in **reducing atmospheric emissions** (close to zero) and ensuring a high degree of recycling of the **chemicals** and **water** used in the process.



- ① Unità di dissoluzione
- ② Batteria mexer-settler in vetroresina (100 stadi)
- ③ Batteria mexer-settler in vetro (100 stadi)
- ④ Unità di precipitazione e calcinazione
- ⑤ Sala controllo
- ⑥ Serbatoi reflui
- ⑦ Unità di preparazione reattivi
- ⑧ Unità separazione cromatografica
- ⑨ Servizi (acqua demi e vapore)

Crismat: modular chemical plant



The plant is equipped with innovative processes and technologies aimed at **better utilization of materials and residues** from industrial processing and limiting the use of natural resources with particular reference to water resources.



These processes/technologies not only contribute to the reduction of the environmental impact of the industrial sectors involved, but also allow for significant **cost savings in the procurement of raw materials** and the final disposal of industrial waste.



The complex consists of:

- a technological hall equipped with all the services and facilities necessary for the management of a modular chemical plant;
- laboratories to house analytical instrumentation to support R&D activities;
- offices for researchers and technicians dedicated to the project

Crismat: modular chemical plant

Aims of the plant



- the demonstration and fine-tuning of processes for the treatment of industrial residues and/or ore concentrates;
- the implementation and testing of analytical systems for process control;
- consulting and design assistance for the construction of industrial-scale treatment plants;
- the treatment of small quantities of material for the recovery of substances of particular economic value and/or the removal of potentially hazardous pollutants;
- the selection, validation and certification of wastewater treatment processes and plants.



Green mining value chain

Mine

The “Aluvion Royo I”
concession



LEARNINGS FROM THE PAST
THAT HELP US IN THE PRESENT:

GoldLake Group

Green mining is composed of former members of the GoldLake Group, the world's first sustainable mining project for ethical gold.



GoldLake Investments, established as an investment company, was headquartered in Gubbio (Italy) and London. It was a joint venture with consulting firm Aral, which controlled 20 percent of GoldLake. The first Italian business to invest in mining in Honduras, GoldLake began operations in Tegucigalpa and developed mining projects with environmentally sustainable extraction technologies.



<http://www.GoldLake.it/Azienda/Profilo.aspx#>

GoldLake's business model for economic & social value generation



The first **mine in the world** to implement an innovative process that used **water** instead of cyanide or mercury to extract gold deposits, recycling **100% of its waste**, operating a **zero-waste water** management system and **replanting** its sites with trees.

At the heart of GoldLake's business philosophy are a strong **social consciousness** and a drive to demonstrate that business can create value by **solving problems**, by being **people-centered** in management and operations, and by fostering **environmental protection**. The Honduran gold mining venture is a test of the company's resolve to apply social values in business, as well as its entrepreneurial talent and technical inventiveness.



WORLD'S FIRST MINING COMPANY TO BE CERTIFIED IN ETHICAL GOLD PRODUCTION



RESPONSIBLE JEWELLERY COUNCIL (RJC) MEMBERSHIP AND CERTIFICATIONS GOLD PRODUCER

To find out more:  <https://www.responsiblejewellery.com/wp-content/uploads/RJC-COP-13-Certificate-Eurocantera.pdf>

Gold: yes, but only ethical!



Through GoldLake's experience over the years, Green Mining has developed a unique vision of sustainable mining.

Cartier has requested the exclusive supply of ethical gold directly from the GoldLake mine. It was the first time the brand has bought its gold directly from a mine.

"What most appealed to us isn't so much Godlake's action in favour of development or social projects but rather its profitable business model with a high added value for the entire community".



↓
Education



↓
Health



↓
Infrastructure

Macroeconomic revenue framework



Mine life cycle

Given the mine's life expectancy and annual revenues, projections indicate promising returns for the foreseeable future.



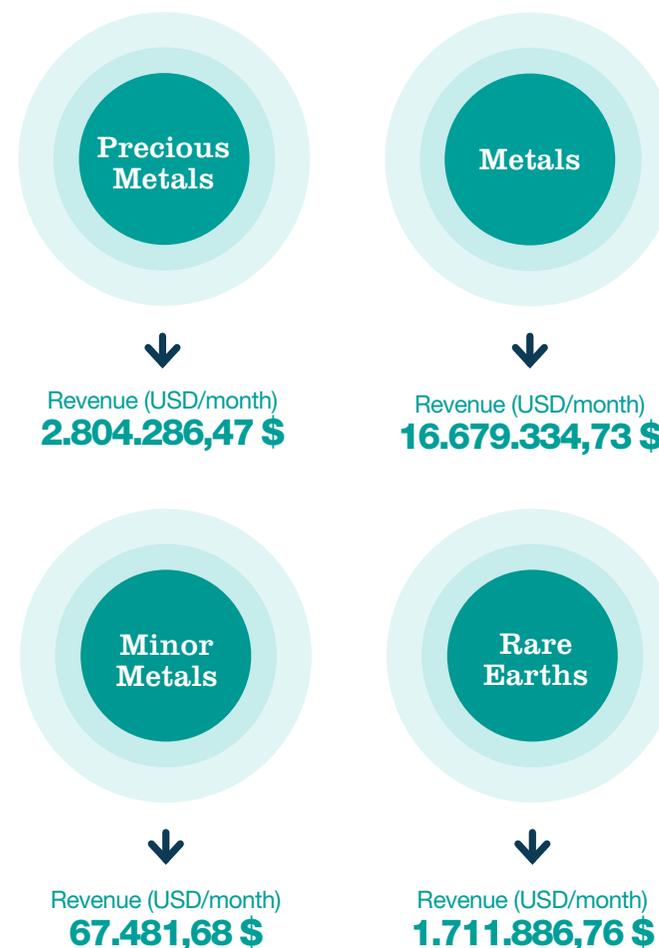
Perspective

Our positive outlook on the mine's performance.



Market analysis

Market studies have been conducted on the resources contained in our deposit, with positive results.



Green Mining

Product Diversification



Calcium carbonate extraction in San Juan



Green Mining SRL is pleased to present its **prospecting project** for the production of **calcium carbonate**, which is currently at an early stage of development. The project aims to exploit an area with a history of calcium carbonate production dating back to the 1960s and 1970s.



Strategic location

The geographical location of the project is one of its main competitive features. Situated in a calcium carbonate-producing area, with approximate coordinates of Latitude 30°21'59.05 "S and Longitude 68°38'47.12 "W, the deposit is located along the bio-oceanic corridor that will connect the Pacific to the Atlantic. This strategic location facilitates access to **international markets** and increases the competitiveness of the end product in the global market.



The production project covers a vast area of more than **25,000 hectares**, with approximately 30% occupied by a **limestone mountain range**. This feature allows the area to be divided into **smaller projects**, facilitating the participation of several investors and **maximizing the exploitation potential**.



Production process and innovative technology

The production process of calcium carbonate and its derivatives will take place through the use of **state-of-the-art technology** and **innovative methods**. These methods allow for greater **efficiency** in the extraction and processing of limestone, while simultaneously **reducing the environmental impact** associated with mining.

Calcium carbonate extraction in San Juan



Geological studies conducted in the area indicate considerable potential for the production of calcium carbonate. The **average reserves** of each project are estimated to reach approximately **10,000,000 tonnes**, with an average **calcium carbonate concentration of 98.5%**. These results confirm the economic and technical feasibility of the project, making it an **attractive opportunity** for investors interested in mining.



Market potential

Importantly, the exploitation area is located close to **large mining projects that require calcium carbonate** in large quantities. The proximity to such projects offers a unique opportunity to establish **strategic alliances** and ensure a stable and diversified market for the production of calcium carbonate and its derivatives.



Conclusions

Green Mining SRL's calcium carbonate production project represents a **unique opportunity** to exploit the area's natural resources and meet the growing demand of the mining industry. With **significant reserves, innovative technology, and a strategic location**, the project is well-positioned for **long-term success**. Green Mining SRL is committed to developing the project responsibly, respecting the environment, and contributing to the sustainable development of the region.

Calcium carbonate extraction in San Juan



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Mining can no longer be an investment end in itself but must be associated with the concept of intergenerational sustainable development, thus ensuring a more persevering time horizon than short-term profit goals.

Green Mining Srl



greenmining[®]

Sustainable Mining

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