FODIENS IN POSTERUM

TECHNICAL PRESENTATION
EMERALD MINE ASSOCIATION
FODIENS & LUVIO VERDE
GOIÁS BRAZIL

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TECHNICAL RESEARCH REPORT AND INSPECTION

LOCATION:

Campos Verdes - Santa Terezinha de Goiás
State of Goiás - GO

Engineer Luis Fernando Camargo Guimarães
Specialist in Engineering Expertise

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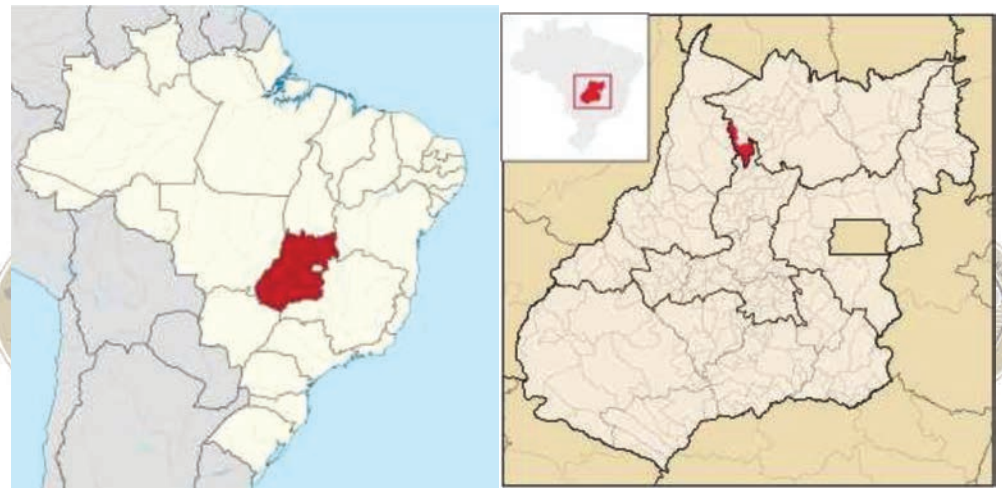
Legal Entity with Mining Law: GILMAR DE SOUZA BRAS
CNPJ / CPF: 245.003.305 - 00
Responsible Entrepreneur: Claiton Roberto Souza
CPF: 286.014.675-04 – Luvio Verde Company
Permission to Pour Gem Issued under DNPM - National Department of Mineral Production - 860771/1991, 860730/91, 860732/91 and 861522/1995.
Land Use Certificate: Issued by the Municipal Government of Campos Verdes Authorization n. 001/2011
Domain Surface Area: 3,500.00 m2 (0.35 ha)
Deed of Purchase and Sale of July 8, 1981, Santa Terezinha de Goias.
Location: Municipality of Campos Verdes, state of Goiás, Brazil.

LOCALIZATION

The Mina area under study is located in an urban area, two hundred meters from the main avenue, within the operating reserve in the municipality of Campos Verdes, in the state of Goiás, distant about 310 km from the State Capital, in the municipality of Goiânia.
Access by highway is made by BR-153 and GO-154, also having an airport to operate small aircraft.



Maps of lacation of the state of Goiás and the Municipality of Campos Verdes

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Image of the area located in the municipality of Campos Verdes, state of Goiás

Image of the airpirt for small aircraft, distance of about 10 km from the area.

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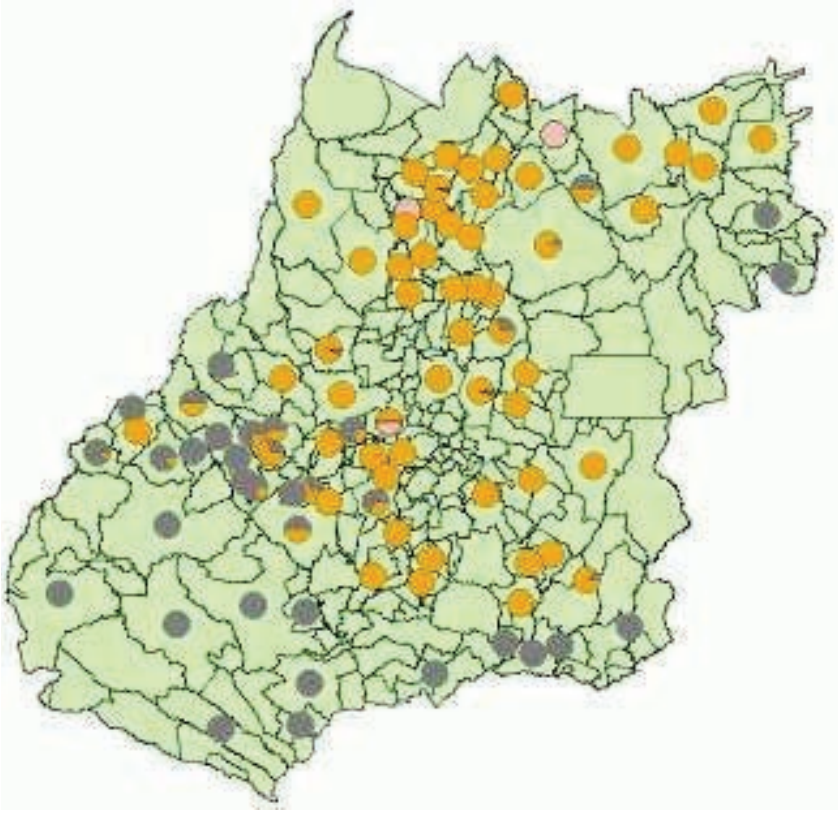
CHARACTERISTICS OF THE REGION

The state of Goiás is the third mineral center in Brazil, behind only Pará and Minas Gerais, not counting the oil producing states. The sector represents about 5% of national production. Among the mineral resources produced and treated in Goiás, mention should be made of asbestos (the largest producer in South America), nickel (major Brazilian producer), phosphate, niobium (2nd national producer), gold, diamond and emeralds.



DIAMOND

GOLD

EMERALD

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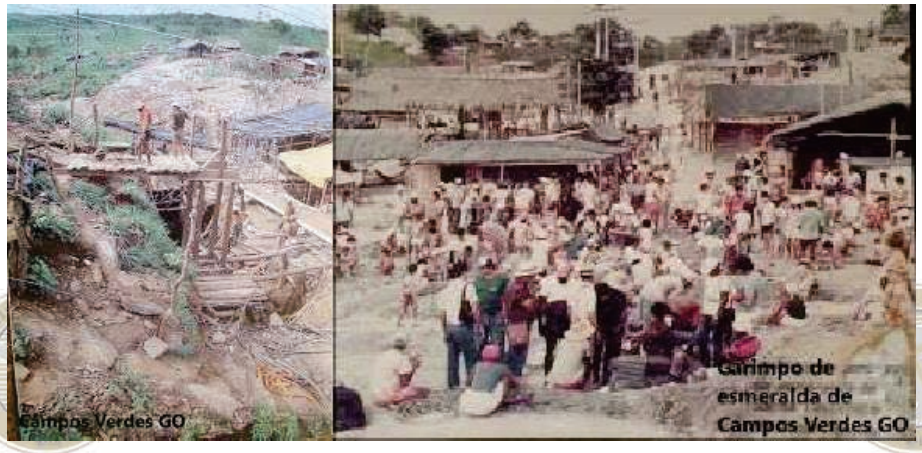
HISTORY OF THE EXPLORATION OF ESMERALDAS IN THE REGION OF CAMPO VERDE / SANTA TEREZINHA

The city of Campos Verdes is located next to the city of Santa Terezinha, which was considered the "Emerald Capital of the World" between the years 1980 to 1990, and became the largest producer of emeralds in the world reaching more than 25 thousand inhabitants

Photos of the entry of the city of Campos Verdes, world capital of the emerald

The mineral occurrence occurred around 1980, at "São João" farm, Headquarters District of the Municipality of Santa Teresinha de Goiás, when the tractor driver Diolindo of Municipality, when patrolling a vicinal road, saw a lot of green stones appear in the middle of the roots of the bushes.



Finding them to be emeralds, thousands of miners, mostly from the state of Bahia, migrated to the site.

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In 1987, the area of exploration was emancipated, being called "Campos Verdes" and became known as the "Emerald Capital of the World".

Over the years, the extraction of emeralds has become more and more difficult, mining companies are now exploring with a shaft up to 620 meters deep, rendered impossible for explorers to gold miners.

Mining companies began to set up and make investments, given the existing institutional framework, local workers sought to associate with companies, with the aim of facilitating the control by the official bodies for mining activity.

The objective area of the present study is located along the same geological and mineralized strip of the largest mining companies in the Campos Verdes city region, Itaobi and Veraobi companys, which exploit and extract large amounts of emeralds in depths of up to 620 meters.

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The region and reserve of exploration of emeralds of the area in study has survey and geological investigation (sounding), is based on the history of exploration and official technical and scientific studies, elaborated by geologists and engineers of mines

ABSTRACT OF GEOLOGICAL CHARACTERISTIC OF THE CITY REGION OF CAMPOS VERDES / SANTA TEREZINHA.

In the region of Campos Verdes, metamorphic rocks derived from proterozoic volcanic sedimentary processes known as the Santa Terezinha Sequence, as defined by Souza and Leão Neto -1984.

The Santa Terezinha Sequence is no longer part of the Mara Rosa Sequence, defined by Ribeiro Filho-1981 as a sequence of volcanic sedimentary rocks of proterozoic age metamorphosed in the green shale to amphibolite facies.

In Campos Verdes, it consists predominantly of carbonate-chlorite-quartz shale, with metric to decametric carbonate-sericite quartz and talc schist intersections, as well as subordinate and / or localized occurrences of biotitites, amphibole schists, carbonates, and albithites.

The carbonate-chlorite-quartz shale, which is the dominant rock in the region, shows greenish gray, light green and dark green coloration, fine and medium granulation and foliate structure, occurs in venules and fractures.

It is common the occurrence of grenades in the composition of these rocks. Disseminated magnetite crystals occur at some levels of the sequence.

Carbonate-sericite quartzite, which occurs in the form of lenses subordinated to grenade-carbonate-chlorite shale, exhibits light to off- white to grayish color, foliate structure and fine to medium granulation. Shale talcs are mineralized and / or sterile, at different levels, or occur at the same time on the same horizon.

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The mineralized shale talc has a greenish gray color with discontinuous levels of dark colors, foliated structure and fine to medium granulation. They are rich in carbonate and levels of biotite and quartz-feldspathic veins.

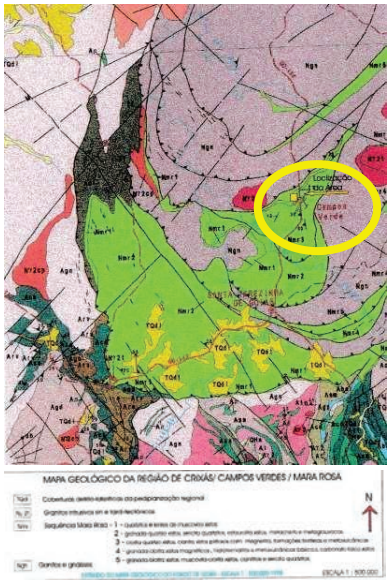
Sterile talcum is generally greyish to grayish in color, massive and / or foliated, in addition to fine to medium granulation, rich in euhedral calcite and sometimes with a lot of magnetite.

The amphibole-chlorite shale shows light to dark green coloration, medium granulation and foliate structure. They are less deformed bands that always occur in gradient contact with the carbonate-chlorite quartz shale.

The biotitites usually occur in contact between the carbonate-chlorite quartz shale and the mineralized schist talc (besides interspersed in the mineralized shale talc), with centimeter thickness to metric.

It is also observed, less frequently, the presence of centimetric levels interspersed in carbonate-chlorite quartz shale.

They have black coloration, foliate structure and fine to medium granulation are often very rich in well-formed pyrite crystals.



Location of the area in the geological map of the region of Campos Verdes.

The carbonate nodules are of restricted occurrence, constituting nuclei with irregular shapes, of centimetric dimensions, dispersed in the mineralized schist talcum, seeming to be the result of metasomatic transformations.

They have light gray coloration, solid structure and fine to medium granulation.

The albitites are found locally (Mina Sr. Celso and Mina do Senhor Netinho), in contact with the talc mineralized shale, or even coftando in the form of (centimetric) dikes.

It presents greenish coloration (chlorite) with white spots (carbonate and albite), massive and / or foliated structure, medium and coarse granulation .

It is considered that the Mara Rosa / Santa Terezinha Sequence, in the Campos Verdes gold mining region, is represented by intermediate to intermediate metavulcanics, with intercalations of ultramafic matavulcanic (talc schist).

These rocks were affected by regional metamorphism / metassomatism and subsequent hydrothermal alteration, which may be represented by mineralogical paragenesis.

The granite São Jose do Alegre, which emerges north of the explore reserve, seems to be responsible for the hydrothermal solutions that, when infiltrating structures of the layers of talc schist, promoted the processes of transformation that led to the formation of emerald deposits.

OF THE EMERALDA EXPLORATION AREA CURRENT SITUATION

The soil where a mineral activity develops is part of the São João farm, a type of large gold mining activity in Campos Verdes and stretches currently covered by the city area of the city, located to the north of the Novo stretch, within the Reserve of exploration of emeralds "Garimpeira" in Santa Terezinha.

The area has the licenses and permits for the exploration of the mineralized zone with Esmeraldas.

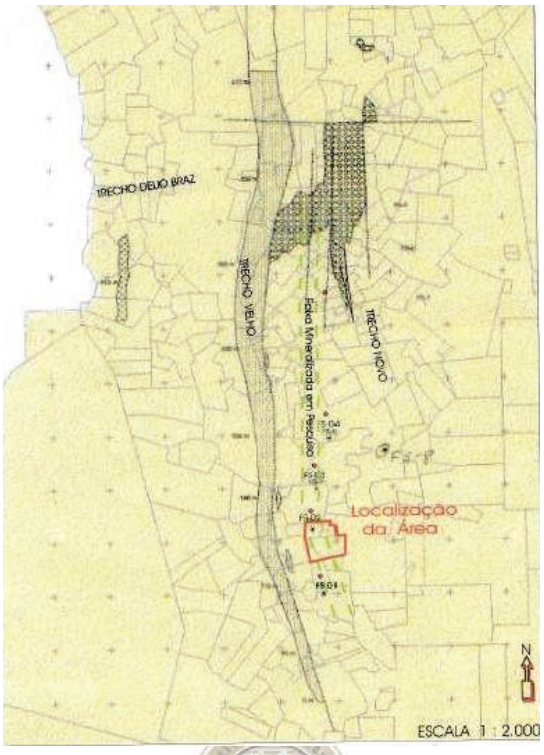
The area is authorized by the National Department of Mineral Production - DNPM, for the emerald rock, under the LGG-PLG scheme, has a total of 3,500 m2 (0,35 ha) for DNPM 86077L / 91 processes ; 860 730/91; 860732/91 and 861 522/1995.

DNPM
Departamento Nacional de Produção Mineral
NATIONAL DEPARTMENT OF MINERAL PRODUCTION

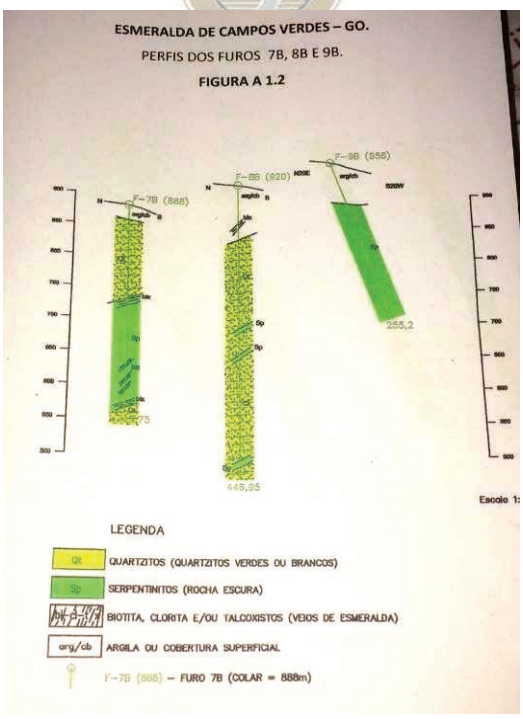
Technical studies of the area indicate that the sub-soil of the area to be explored is rock composed of carbonate-chlorite-talc schist, which represents the ore bearing emeralds.

To meet an existing demand in the area and at the same time make the project economically viable, about 25 cubic meters (25 cubic meters) of ore per day should be extracted. Monthly, about 625 m3 (25 working days) should be produced.

The Lavra area and the beneficiation plant authorized for exploration is 3.500.00 m2, however, only a part of it must be occupied by the mechanisms involved in the work of mineral extraction.



The geotechnical figure of the mineralized strip, in green the mineralized area, in red the location of the area.

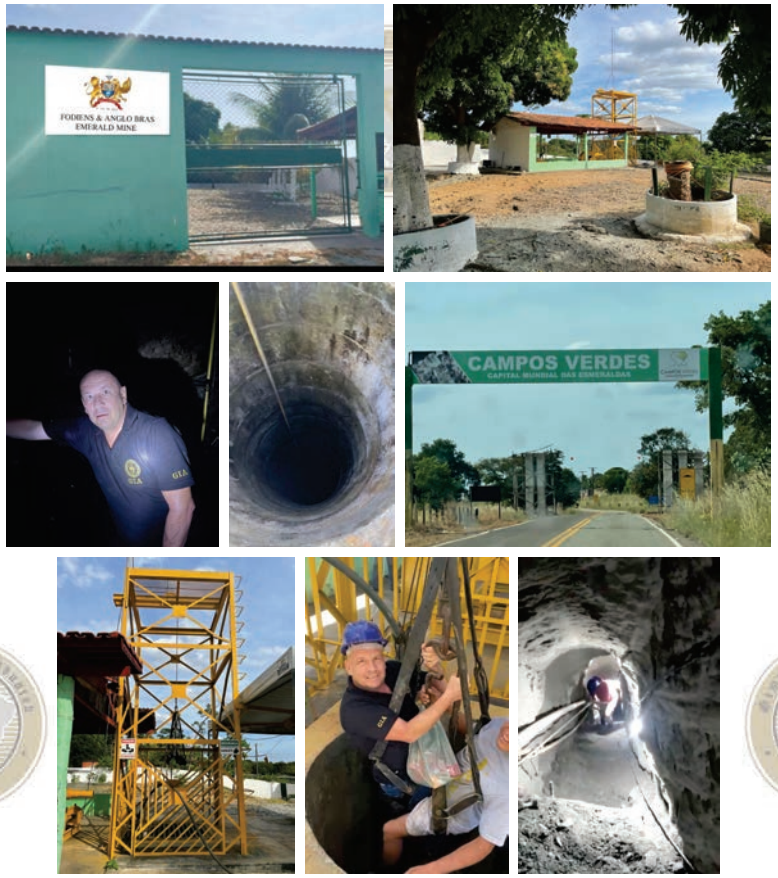


Geotechnical study of the sub-soil and plant sub-soil profile of the area.

The dismantled rock will be transported to the surface and deposited for a short time while it is being driven to the washers where it will be processed at a distance of about 7 km.

The personnel involved in the mining work will be 11 (eleven) people during a shift, distributed as follows:

Geologist or Mining Technician: 01
Administrator or head of class: 01
Winch Operator: 01
Create alert Share Save Mine Operator (Drilling): 01
Drilling Assistant: 01
Mine operator (transport of material): 03
Guard: 0



General image of the area, buildings ready to start work, shaft where drilling activities will be developed. Inspections were carried out in facilities and equipment

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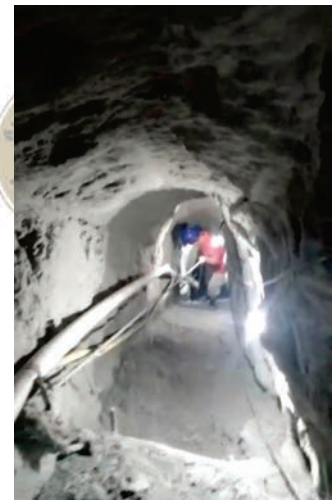






General image of the area, buildings ready to start work, and equipment.
Inspections were carried out in facilities and equipment.

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The dismantled rock will be transported to the surface and deposited for a short time, after being transported to the washers where it will be processed, a place with a distance of about 7 km. General view of the area.

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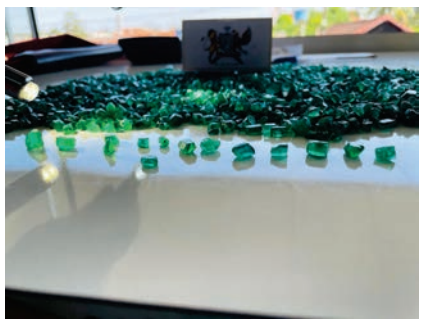
The extraction of emeralds in the area, due to the characteristic of the region, first occurred through open pit veins, in alluvium or outcropping mineralized rocks, and is currently being explored in Shafts with galleries excavated in the rock and in the form of galleries at the level of the veins.

The annual report on production of crude emeralds from the last years 2020 to 2022 corresponds to:

- **2020 to 2021:** 1,876 kg
43% good quality emeralds
27% emeralds of medium quality
30% medium quality emeralds;
- **2021 to 2022:** 1,777 kg
40% good quality emeralds
25% medium quality emeralds
35% medium quality emeralds;





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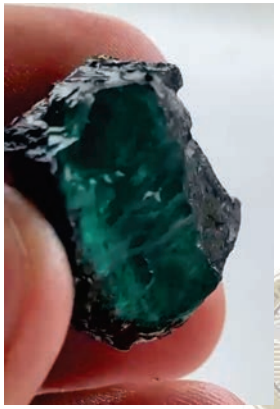

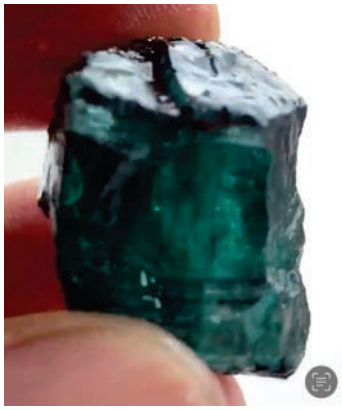

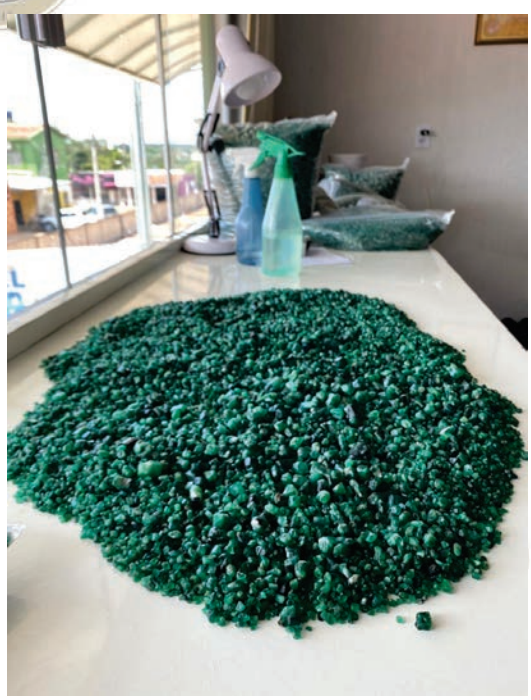

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INVESTMENTS - SITUATION INTENDED

Through the composition of a new company based in Brazil, direct and indirect investments will be made to develop the productive and economic activities of Mineradora.

Existing buildings will be renovated and expanded, new buildings will be built and improvements made in infrastructure.

Will be acquired new equipment and incorporated the mining company, as well as the hiring of new professionals and service providers.

The direct investments at the acquisition of goods, equipment and materials, in order to obtain the best performance and results in the development of Mineradora's activities.

Production and stock of the mining machine 1.300 kg of natural emeralds.

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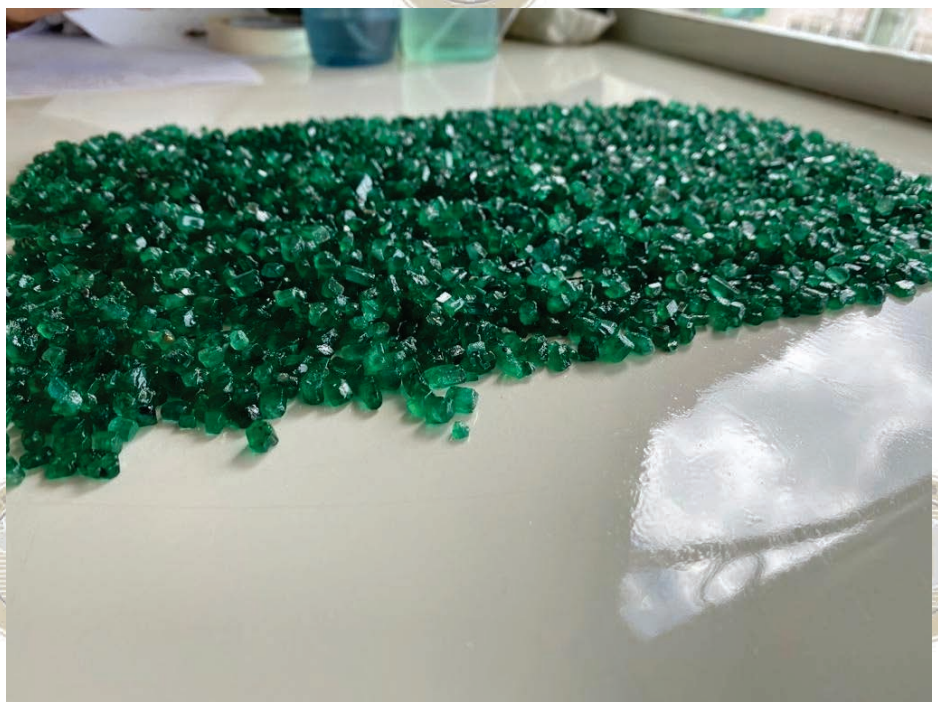
Mining production and inventory 1.300 kg of natural emeralds.



Production and inventory of the natural emeraldas miner.

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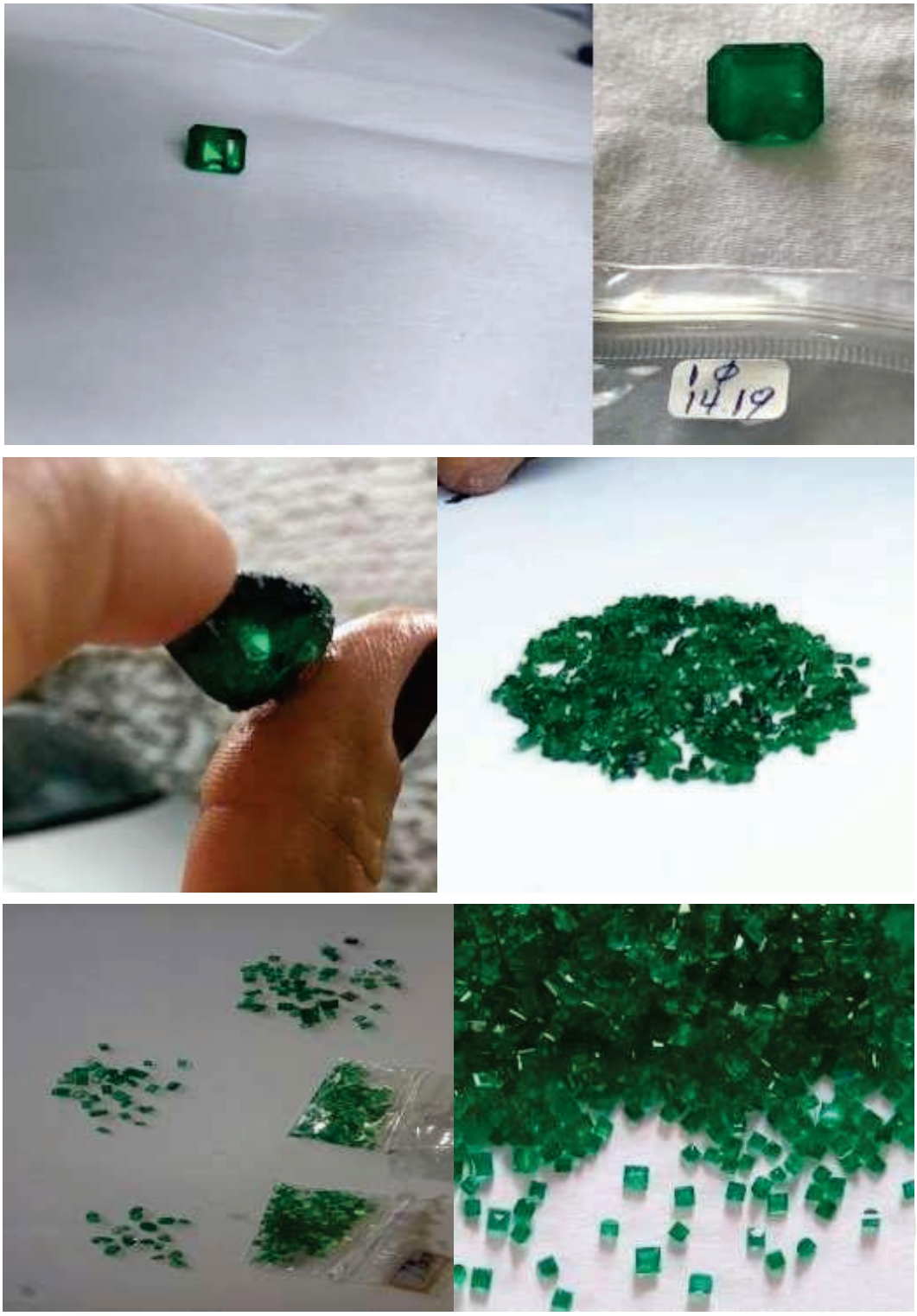

Part of the stock of the mining machine of cutted emeralds.

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RESULTS

The area has the necessary geological studies to allow us to have all the transparency of the área.

The area has a emerald production history and estimate of annual production 1.600,00 kg of total emerald (gemological and non- gemological) per ton of biotite shale drawn.

The reserve studies indicate the order of 494,000 kg of gemological and non-gemological emeralds, noting that the geological characteristics of Campos Verdes are more optimistic in relation to the information indicated.

Therefore, based on the existing studies of areas with the same geological characteristics and located in Green Fields, it is estimated the billing, according to monthly estimates of emerald production of 130.00 kg / month, and for the period of 20 years, it is of approximately U$ 50.000.000.000.00 (fifty billion dollars).

SUMMARY

The information and conclusions of this work are confidential and can not be reproduced or divulged without the proper authorization of this Professional.

The technical studies developed in the area and region of the city of Campos Verdes, Santa Terezinha, technical studies developed by the Goiás State government, studies of independent geologists, technical information collected in the region, published scientific, and the history of production the area, the region and companies operating in the same geotechnical region.

The area under study is authorized by the official inspection bodies and is properly regulated for the exploitation of emeralds.

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The area is located in the most important stretch of mining in the region of Campos Verdes, in the old and famous city of Santa Terezinha, considered the Emerald World Capital.

The region and the area has a history of production and stock of raw material and finished, being located next to the largest mining company in the region of Campos Verdes.

According to the results already obtained in the Field, from the geological mapping studies consulted, the estimate of emerald production in dollars for 20 years is approximately U$ 50.000.000.000,00 (fifty billion dollars).

After the beginnings and formalization of the partnership, the mining company Will be able to produce emerald from three to twelve months, estimating through the history and studies, estimated production in 20 years, with feasibility of acquisition of areas around the current area.

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CURRENT MARKET FORECAST FOR THE FUTURE

Update of the current Gemstone market for the year 2018 to 2024.

CORUNDUM RUBY - The global corundum market is expected to grow at higer rate during forecast period 2018 to 2024.
Asia - pacífic is the major producer and consumer of corundum, China owning the prime credential for this regions in the elteronics sector.
The major application of corundum are jewerly and abrasive because their toughness, hardness and chemical stability. It is mainly used as abrasive for grinding, optical glass and for polishing metals, preparation of tooth paste since is abrasive keeping teeth clean and white.
To cater to the growing demand, is now being calcinet bauxite, firebrick, kiln liners furniture.
Also window of store scanners, watch crystal and aircraft window.




EMERALD - many new sources of emerald mine growing in Brazil, Colombia, África, Nigéria, Afghanistan, Zambia with few production good to commercial quality and some regions on, Colombia market demand very strong and Brazil still have plenty production in Bahia, Minas Gerais and Campo Verdes.
New 2022 production of small and medium stones, similar to the Colombian e merald by Muzo.
The market is heated and growing, increasing in value from 50% to 200%.



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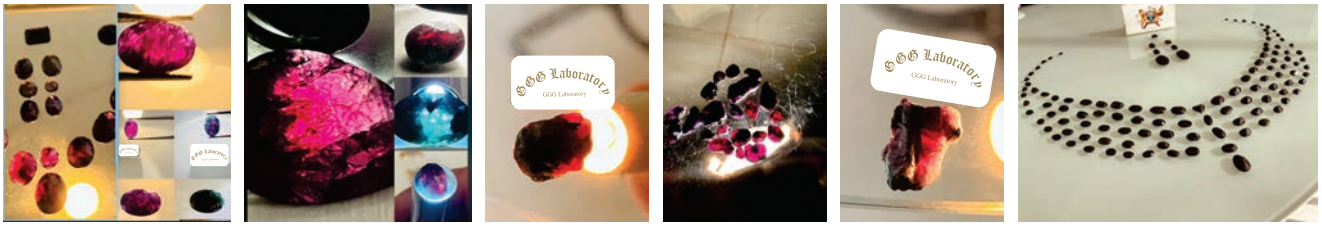
ALEXANDRITE CHRYSOBERYL - Is always big demand but not anough production some country Burma, Sri Lanka, Madagascar, India, Rússia and Brazil production very scarce cant afford the market.
Currently, Brazil is the largest producer of Alexandrite. Due to the stabilization of the policy, the domestic and foreign markets are hot and promising.
In the widely used industry almost the same as ruby, stands out most in the army industry specially to produce missiles pointers and window for spaceship at Nasa, military and medical laser beam instruments.
Due to the scarcity of the product, there is a growing appreciation of the asset. Ranging from 100% to 300%.



TOURMALINE PARAYBA - is the best gem in the planet.
In my certificates and appraisals I always mention the super evaluation due to rarity and beauty only 2 part of planet we found Paraíba is Brazil original and Mozambique but is wrong to say Paraíba from África is correct to say Cuprian albite different than the others tourmaline because the chemical composition high or low elements cooper, barium and manganese.
Today question is to find Parayba and no matter prices every year very scarce production, was discovered in 1989 by Mr. HEITOR DIMAS BARBOSA at São José da Batalha in Parayba state of Brazil.
Its very difficult to find neon blue about 1 to 2 grams by 100 tons of kaolin and big pieces of collection blue neon, green, violet red and purple cant find anymore due to the prime digging in big hole after that some small assorted sizes. 1989 stone was us 2,000 per carat after Jewerly show in Tucson increase tremendous prices to us 12,000 and double price every months not a year.
Today Parayba tourmaline is more rare than diamonds due to the unique places to produce and every year is less and less than others years.
Today the increasing value due to rarity, scarcity and demand. The value per carat exceeds $100,000 to $500,000.
Due to the scarcity of the product, there is a growing appreciation of the asset. Ranging from 100% to 300%.

180ct 25ct 1.080ct 200 grams 143 grams 110 grams

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- No changes to this report may be made by anyone other than the appraiser whose signature is appended to this report. If changes are made by others, the signed appraiser is not responsible for same and the appraisal is null and void.

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1 Unless otherwise stated therein, the appraised value(s) is (are) based on the whole ownership and possessor interest undiminished by any liens, fractional interests or any other form of encumbrance or alienation.

2. This certificate is made at the request of the party named for his or her use. It is not an indication or certificate of title or ownership. The identification of the interest of the requesting party is simply that represented to the appraiser by such party and no inquiry or investigation has been made nor is any opinion given as the truth of such representation.

3. The value(s) expressed herein is (are) based on the appraiser's best judgment and opinion and is (are) not a representation of warranty that the item(s) will realize that value if offers for sale at auction or otherwise. The value(s) expressed is (are) based on current information on the date made and no opinion is hereby expressed as to any future or past value(s), unless otherwise expressly stated.

4. Stated value(s) is (are) given item by item unless clearly stated as being per lot. The total of individual item values shall not be constructed as an appraisal value of the whole lot but merely as the addition *of* single values. Were values are given by lot, the value per lot is for the whole and no opinion is given as to the individual proportional values with the lot.

5. Unless otherwise stated herein, the value (s) expressed is (are) based on the general expertise and qualifications of the appraiser as to the appropriate markers and valuations of the item(s) and purpose and function involved. Where particular detailed valuation information is relied on, it will be stated in writing.

6. Where an appraisal is based on a sample of a larger whole, it will be so stated. The value will be based on the assumption that the sample (s) delivered is (are) representative and fair. No opinion or warranty is here by made as to the fairness or representative nature of any large whole from which the same was drawn.

7. Where an appraisal is based not only on the item(s), but also on data or documentation supplied therewith, the appraiser shall so state by making reference thereto, and, where appropriate, attaching copies of such documentation hereto.

8. Unless expressly stated, the condition of the item(s} is (are) good for its type, with serious deficiencies and repairs noted. Ordinary wear and tear common to this type of item(s) is (are) not noted.

9. Possession of the report, or copy thereof, does not include the right of publication without the written consent of the appraiser. This report in its entirety, or any part hereof, including the identity of the appraiser, or his firm, shall not be made public through advertising, public relations, sales, or other distribution or information media without the written consent of the appraiser

10. No changes to this report may be made by anyone other than the appraiser whose signature is appended to the report. If such changes are made, the signed appraiser is not responsible for the same.

11. Diamonds and gemstones have become increasingly difficult to identify as natural, treated, assembled or synthetic. All diamonds and most gemstones are potentially subject to treatments that vary from easy to highly difficult to detect. Currently, few appraisers and small gem labs have any of the equipment which screens out diamonds and gemstones for more advanced testing. Those which would be screened out need to go to major laboratories for definitive scientific examination which requires costly equipment operated by highly trained experts. **Consumers should obtain proper paperwork from the retailer selling them a diamond or gemstone which reports the natural or other origin of the major stones along with revelation of any treatments present.** This is beyond the scope of what most independent appraisers can provide to their clients. Appraisers always make some assumptions to produce reports but now, in 2015, we need to make assumptions of importance on virtually every diamond and most gemstones. Since every report is a different situation, it is up to the appraiser to determine what assumptions should be stated on the report. Your appraiser will discuss this subject with you in order to formulate the correct set of assumptions based on the evidence and history of the diamonds or gemstones which are being evaluated.