WE SHARE FUTURE LIMITED

BUSINESS PLAN

FOR

MINERAL PROCESSING

AT
NYAMAGATA VILLAGE,

MGUSU WARD GEITA

DISTRICT GEITA REGION

1.0. Introduction

WE SHARE FUTURE LIMITED is a new company incorporated in Tanzania with Certificate of Incorporation **No. 176692464** dated **30th July 2024**, the company is owned by 5 shareholders.

WE SHARE FUTURE LIMITED has acquired land located at **Nyamagata Village, Mgusu Ward, Geita District, Geita region.** The proposed areas will be used for the gold processing center.

WE SHARE FUTURE LIMITED vision is to offer our clients a reliable, secure, and gold processed with high quality. WE SHARE FUTURE LIMITED also aims to be amongst the medium-sized companies providing gold processing facilities of high quality with environmentally friendly equipment by the year 2025.

WE SHARE FUTURE LIMITED location in Geita is very strategic as is the area with large and good quality gold deposits in Tanzania and the availability of a skilled workforce is fundamental for such projects, Geita is the ideal place where abundant skilled forces are available that will lower overheads in running gold processing facility.

WE SHARE FUTURE LIMITED intends to procure the best equipment to be able to provide the best services for our clients, lower operation costs and increase gold recovery. **WE SHARE FUTURE LIMITED** goal is also to ensure that we build a business structure that will aid us in achieving our corporate goals and objectives.

WE SHARE FUTURE LIMITED intention in running a smooth business with as less hitches as possible is to ensure that we hire the right number of employees who not only understand the industry and are professionals but also are attuned to our corporate goals and vision and are committed to ensuring that these goals and visions are achieved.

WE SHARE FUTURE LIMITED intends to provide a conducive and friendly environment for our employees as well as ensure that they get the required training that is continuous so as not only to enhance their skills and increase productivity for the organization but to also ensure that the skills gotten are the best across similar start-up such as ours in the industry.

2.0 Some of Few Selected Machines and other items

- Jaw Crusher (Primary)
- Jaw Crusher (Secondary)
- Hydro cyclone
- Ball Mill
- Steel Balls
- Pendulum Feeder
- Vibrating Screen
- Air Blower
- Knelson Concentrator (Centrifugal)
- Belt Conveyor
- Slurry Pumps (Rubber Liners)
- Pre-installed powder coated steel cable basket/tray
- Pre-installed plastic control
- Biometric access control
- Fire Detection
- Electrical cabling
- Standby Diesel Generators and Bulk Fuel Tanks
- Fuel quantity and quality monitoring
- shaking table
- cones Reichert
- Jigs,
- Dry washers
- Sluice box
- Riffles
- The elementary equipment
- Flat trays
- Washing plants
- Spiral Concentrators
- Dredge is a machine
- Pachuca Tank

3.0 The Sponsors

WE SHARE FUTURE LIMITED will be sponsoring this project. The Company is currently jointly owned by 5 shareholders.

Shareholders names	of ownership	Nationality
Li Wenjin	43	China
Chen Li	10	China
Xing Yishi	5	China
He XiangJu	10	China
Zeng Zepeng	32	China
TOTAL	**100**	

3.1 Objective of Study

The purpose of this study is to work out the technical and commercial details and financial viability of the project

3.2 Location

There are two considerations on this point. One is referred to as the mine and the other is the processing plant. Ideally, the first one must be close to the plant, but sometimes the area and accessibility are serious issues. Probably, the most critical aspect is the plant location due to the idea of having a good foundation for the buildings to be constructed and using the geography of the area. The latter is important because the gravity force must be utilized at maximum. After all, energy is an operative cost that will influence the economy of the project.

If the plant will be located near cold zones where the temperature can reach low values, the building must consider special protection due to existing the possibility of having frozen problems with the slurry. This situation is painful if the problem is not considered before. The project location the of gold processing facilities has been selected after considering all factors, the project will be located at **Nyamagata Village, Mgusu Ward, Geita District, Geita region**

3.3 Profitability

The economy and profitability of the project are influenced by the mining costs, operative costs, shipping costs, impurity levels, concentrate treatment charges, and smelter/refinery returns. These factors have to be projected from laboratory tests or scaled metallurgical tests. A gold concentrate has to be related to the mineralized block, gold distribution, and diluents such as pyrite, graphite, clays, and organic matter. WE SHARE FUTURE LIMITED has studied all these factors

together to optimize the revenue of the project according to the mineralized zone.

4.0 Gold Recovery

Gold recovery comprises similar stages to the processing of most ores. First, the valuable minerals are to be separated from the gangue through concentration. The final concentrate will be obtained by repeated processing and is smelted or leached to get a Dore bar. In general, the concentration of gold will include three stages: roughing, cleaning, and scavenging. The reason for concentration is to separate the raw material into two products, concentrate and tails. Ideally, in free gold recovery, all the gold will be in the concentrate and the other part will be in the tails. Separations are not perfect and some waste material is reported into the concentrate and some gold particles remain in the tails. Intermediate products are called middlings and can be defined as particles that belong in either the concentrate or tails. Sometimes, this product is a serious problem.

Roughing can be considered as the upgrading of the ore to produce either a low-grade, preliminary concentrate or to reject tails that contain gangue at an early stage. The equipment used in this part can produce a large amount of concentrate and permit the recovery of a very high percentage of gold, produce clean tails, or a combination of both. The most common equipment are cones Reichert, jigs, sluices, and dry washers.

The rougher concentrate is sent to the cleaning stage in order to eliminate impurities; the process can be as simple as washing black sands by using a vanning dish. Mineral concentrates can pass through several stages of cleaning before a final concentrate is obtained. The equipment employed in this stage is the same equipment used in the rougher stage. Other equipment such as a shaking table is employed in the cleaning stage and let to obtain clean gold concentrates.

The last stage is called scavenger and consists in to process tails from rougher and cleaning stages before discarding them. The material is treated through equipment that concentrates the last particles of gold. This stage is included according to the design adopted in the operation and can be simple or complex depending on the ore type. In operations where there is an amalgamation, this stage is employed to recover quicksilver that otherwise will be reported in the environment. In general, the equipment employed in the other stages can be used in this stage.

There are some considerations related to the concentration process. Recovery is the percentage of gold in the raw ore collected in the concentrate. For example, a recovery of 85% means that 85% of the gold is reported in the concentrate and the remaining part is in the tails. A concentrate grade is the gold content in the concentrate and usually is expressed in grams per tonne (g/t) or ounces per tonne (oz/t). the ratio of concentration is the proportion of the weight of the feed to the weight of the concentrate. For example, if 500 tonnes of ore feed are processed and 100 kilos of concentrate is obtained, the ratio of concentration is 5,000. If we compare this value with a mine operation whose ratio of concentration is 2,000 and the concentrate grade is similar, the second operation is economically better because it needs excessive raw ore to get a good gold concentrate.

Exist an inverse relationship between recovery and concentration grade. This means, that the higher the concentrate grade, the lower the total recovery. In general, some valuable mineral is lost in producing a high-grade concentrate. Under this consideration, the higher concentrate grade is easier to refine reducing refinery costs. For each operation, a special combination of grade and recovery must be achieved to get optimum incomes.

Gravimetric concentration

Concentration by gravimetry was the first method employed to concentrate minerals and has been the bastion of concentration for many years. Froth flotation has been a competitor due to gravity concentration is not able to give the sharpness of separation possible with flotation. Gravity concentrator has two main characteristics, coarse gold particles can be recovered and the operative cost is low.

The difference between the specific gravity of gold (19.0) and the low specific gravity of the gangue (2.7) makes gravity concentration the primary means of recovering free gold particles. In general, gravity separation has some advantages over flotation and leaching, it needs significantly lower capital investment, less power, and low handling costs. Also, waste material disposed of in the environment is less harmful.

As was mentioned, the high specific gravity of gold is an advantage, but there are negative characteristics of free gold that tend to affect its recovery. Flattened particles, cavities, and irregularities reduce the effective specific gravity of gold and could cause it to float rather than sink. The flat shape of tiny particles can create hydroplaning.

It has been noted that the size and shape of a particle have a very significant effect on its settling velocity due to the gravity being related to the mass of the particle. Under this idea, coarse gravel must be removed by screening from the feed before trying gold recovery. Usually, a grizzly followed by a trommel is appropriate to perform this operation. Then, it will be important to consider elaborate feed sizing if the gold particles have a big variable distribution.

Sluice

A sluice is defined as a channel through which controlled amounts of diluted slurry. Sluice boxes and riffles are one form of gravity separation equipment. The medium size of this equipment to be employed by the company will use sluices made of aluminum or steel. sluice section of 12 feet long and one foot wide. As a rule, a long narrow sluice is more efficient than a short wide one. The sluice must slope 4 to 12 inches per 12 feet depending on the water available, the coarse particle to be processed, and the possible gold particle size.

The riffles in a sluice retard material flowing in the water that forms the sand bed that traps heavy particles and created turbulence. This turbulence causes heavy particles to tumble and repeatedly exposes them to the trapping medium. An overhanging lip known as a Hungarian riffle increases the turbulence behind the riffle that agitates the sand bed improving gold recovery. Riffles are fabricated of wood, rocks, rubber, and steel and they are 1-1/2 inches high, placed from one-half inch to several inches apart. The riffles are commonly fastened to a rack that is wedged into the sluice so that they can be easily removed.

Riffles

Riffles and other materials are used to line sluices for enhanced recovery. Long-strand Astro Turf carpet, screens, and rubber mats will be employed.

Typical operative parameters are listed below:

- Slurry, steady, and pre-screened at 5 mm
- Percent solids, 15%. Clayed material needs special conditions
- Flow velocity, depends on box width and slope
- Stream depth, 20-30 mm
- Slope, 10-25 degrees
- Length, 2-5 m
- Width, depend on flow speed
- Water, 30-70 m3/h/m

To perform efficiently, a sluice needs large amounts of water. Enough water must be added to the feed to build up a sand bed in the bottom of the sluice. For maximum recovery, the flow should be turbulent, yet not forceful enough to wash away the sand bed, clear water is run through the sluice until the riffles are clear of gravel. A pan or barrel is placed at the discharge end to prevent loss of concentrate. Starting from the head of the sluice, riffles are carefully washed into the sluice. According to the model, any bottom covering is removed and washed into a separate container. Clean-up continues until all riffles are washed. Large particles of gold should be removed by hand, and then the concentrate is washed out of the sluice or dumped into an appropriate container. The concentrate can be smelted or cleaned more by panning. After clean-up, the sluice is reassembled and more ore is processed.

Riffles separate heavy and light particles

Gold recovery with sluices will vary depending on several factors. Fine gold losses can be minimized by cleaning up more frequently, reducing the speed of the slurry flow to around 0.50 to 0.80 m/s., and decreasing the feed size by performing a previous screening. Some experienced operators have increased recovery by adding a liner to the sluice to trap fine gold and other have lengthened sluices to increase the residence time and the trapping area.

Sluices are used due to their low cost and availability. They need little supervision and maintenance; they can tolerate large fluctuations in feed volume; they are portable and can be achieved acceptable gold recoveries. Unfortunately, there some disadvantages such as very fine particles are not recovered, needs frequently clean up, and is important to have a big source of water. Some manufacturers offer sluice boxes fabricated for specific conditions.

Jigs

Jigging is one of the oldest methods of gravity concentration. The elementary equipment is a hindered settling device consisting of shallow, flat trays with perforated bottoms that contain layers of high-density material such as particles of steel balls through which water pulsates up and down. The direction of flow through the bed is reversed several times. In this way, the bed is dilated by the forward stroke of a plunger and compacted by the plunger's backward stroke.

In general, this equipment uses the differential acceleration of particles of different specific gravity to separate gold minerals and gangue. The slurry containing the minerals to be concentrated is fed onto a permeable screen. The

jig operates by the periodic movement of water pulse through the screen. Stratification in a bed of particles results from the repeated pulsation of a current of fluid up through the bed. The particles in the bed are expanded so that when pulsation finishes, the particles are allowable to consolidate under the influence of gravity. The expansion and contraction is repeated in a cycle operation until the heavy and light particles are stratified according to their densities (specific gravity).

The jigs operate by the periodic movement of water through the screen. The upward velocity of the water brings all the particles into a suspension with particles surrounded by liquid. The water maintained in this movement and then allowed to drain back through the grid. The bed of particles collapses back onto the screen and differential acceleration of particles occurs during this stage of the process. The next figure shows the expansion and contraction of bed particles.

Bed

Typically, jigs are able to treat coarse material and for this reason they are located in the grinding circuit. They can receive slurry from the ball mill discharge or hydro cyclone underflow. The idea is to recover gold minerals soon in order to avoid overgrinding. The concentrate is collected at the bottom of the jig and the tails are moving out of the jig at the top of the bed. Although most gold is collected at the bottom, coarse gold particles like nuggets can stay at the top due to the screening opening size being smaller than the nugget.

Shaking Table

This is one of the best pieces of equipment employed to obtain clean gold concentrates. They consist of a ruffled deck on some type of support. A motor placed on one side drives a small arm that shakes the table along its length. The table has riffles that are not more than one inch high and cover almost half the table. Varied riffle designs are available in the market and each manufacturer has a special according to its use. The table oscillates horizontally and concentrates the heavy particles due to inertia differences created by the brisk, reciprocating motion of the inclined deck of the table. Coarse particles feed needs long strokes at lower speeds and fine particles need shorter strokes at faster speeds.

Deck sizes range from 18 by 40 inches for laboratory tests to by 15 feet for industrial applications. Tables can treat 175 t/d. The equipment is fabricated with two basic deck types, rectangular and diagonal. The first one is roughly

rectangle-shaped with riffles parallel to the long dimension. The second group is irregular rectangles with riffles at an angle. In both types, the shaking motion is parallel to the riffle pattern. The diagonal decks are usually constructed of wood and metal and are lined with rubber or plastic. These materials have a high coefficient of friction that aids gold recovery.

Washing plants

This kind of plant is oriented to reject non-valuable material and reduce the problems produced by fine material, specifically when the clay content is high. In general, washing plants are able to perform classification, concentration and Recovery of gold minerals from Placer/Alluvial Fields and hard rock. They can be combined with other concentration plants.

Washing plants have an important advantage, they are easily moved and some of them were designed with water tanks for use in places where the water source can be a problem. Small designs can treat 150 to 180 cubic meters per hour at 20% solids.

A point very important is the screening due to is the first separation operation and the screen surface must be designed considering the apertures for the passage of fine material. The screening area must be enough to support the weight of material being screened, also have to be flexible to promote vibrating forces and light to avoid obstructions so that the throughput cannot be affected. Typically, a grizzly is included at the beginning of the washing plant. The oversize material can be rejected is the gold is present in fine particles and can fed the crushing circuit when there are interesting amounts of free gold (nuggets). A gravimetric device such as a jig can be included in the design of the equipment. The flowsheet must consider several options so that the operations can be able to treat different gold ores.

Dredging:

Dredging is an underwater excavation performed to recover gold from placer deposits. Initially, the excavation needs to make a channel, the continuous dredging will let you know the potentiality of the deposit. Obviously, dredging is not exclusive for mining purposes; this operation can be employed to clean lakes and different aquatic environments that must stay safety for navigation purposes.

Essentially, a dredge is a machine that removes material from aquatic environments. In this way, the process involves a digging operation of underwater placer deposits by using two types of equipment's, cutter head and cutting bucket line. During the operation, digs, scrapes remove material and send it onto the platform that is located in the dredge. Normally, the ore is treated on the dredge by washing, screening and concentration operations. The non-valuable material is returned to the water. The final place is selected considering environmental aspects.

Flotation

Flotation is one of the most important gold recovery processes and its main restriction is to recover coarse gold particles ranging from 400 to 250 μm. This process recovers fine particles of free gold, gold associated in any form with sapphires, and native gold present in polymetallic deposits with certain degree of oxidation. For many years, a combination of amalgamation, cyanidation and flotation made possible to get high gold recoveries. With the time the technology and design consideration changed and flotation and/or cyanidation processes are the favorite combination. When gold is recovered by flotation, a high-grade concentrate contains gold and can give an extra value to copper and lead concentrates. The concentrate can be ground, roasted, treated by cyanidation and the final product is gold bullion.

Considering the fact that native gold and electrum have variable composition and different parts of the same particle could present different composition, the recoveries of these particles by flotation is possible due to they are naturally floatable. Also, there is a theory about the effect of silver content on gold flotation rate. By this theory, if there are two silver-gold particles, the particle with higher silver content has a high flotation rate. This effect is probably influenced by the galvanic interactions between silver, gold and grinding media. Native gold is floatable by chemical or physical actions on its surface. In this way, free gold particles affected by word-hard can have better floatability than a clean surface. Alluvial gold particles are normally flakey and have received deformation and flattening during their formation from the host rock and transport to the final location. This action created work hardening. During comminution, the gold surface is contaminated by minerals and steel from grinding media. This process promotes flotation.

Leaching

Cyanidation

When we have to mention hydrometallurgical treatments, the cyanidation process must be mentioned initially because too has been employed in the gold

mining industry for a long time. The process is supported by two facts, gold is soluble in dilute solutions of cyanide, and second, the pregnant solution can be processed successfully by using zinc powder or activated carbon and electrowinning. In other words, the process involves several steps from crushing to obtaining a Dore bar.

The basic principle of the cyanidation process is that alkaline cyanide solutions have a preferential dissolving action on the precious metals contained in an ore. The reaction generally accepted is shown below:

The gold dissolution rate is dependent on the concentration of NaCN and the alkalinity of the solution, the optimum pH is around 10.5. For efficient leaching, the gold should occur as free, fine-size, clean particles in an ore. The presence the certain minerals such oxidized copper minerals is a poison for the process due to copper will be dissolved in first instance and the free cyanide will not be used for gold dissolution. Also, it is important to mention that an adequate supply of dissolved oxygen must be present in the cyanide process.

Cyanidation by agitation

Cyanidation by agitation and heap leaching are the most employed processes for treating gold ores. The first one comprises several steps: crushing and grinding operations oriented to liberate gold particles so that they can be leached. The comminution product must be 80-90% passing 75 μm. Normally, the process is employed when the gold content is ranging from 5 to 15 g/t. The grinding circuit is the first cyanidation circuit and the ball mill work as leaching drums. Once liberation is complete, the next step is to agitate the slurry to perform a complete dissolution of gold. The solution and the non-valuable ore must be separated directly if the gold content is high, otherwise must be enriched by using activated carbon. The pregnant solution from the activated carbon is eluted and feeds the electrolytic cell where gold will be recovered in the form of cathodes. If the solution is rich enough can be treated with zinc powder and the precipitate obtained (cement) will be sent to retorting and smelting. For gold extraction, the strength of the cyanide solution ranges from 0.01 to 0.05%. Lime is added to the process to have a pH near 10-11.

The different minerals and foreign substances can affect the cyanidation process in several different ways. Silver is usually present with gold either in small or high amounts. The silver content in gold ores may range from 1 g/t to 300g/t. Oxidized copper minerals may be dissolved by the cyanide leach solution and thus consume large quantities of NaCN and oxygen. Arsenic

minerals may also interfere with cyanidation. Realgar and orpiment react rapidly with the cyanide solution and inhibit the dissolution of gold. Arsenopyrite generally oxidizes very slowly in an aerated cyanide solution and has very little adverse effect on the leaching of gold. Stibnite affects negatively the cyanidation process. The presence of base metal ions such as Fe^{2+}, Ni^{2+}, Cu^{2+}, Zn^{2+}, and Mn^{2+} makes slow the cyanidation of gold. Other negative compounds are carbonaceous materials because they act as adsorbents for the gold dissolved by cyanide solutions. Organic substances such as wood, oil, and grease, slow down cyanidation of gold by consuming the dissolved oxygen in the pregnant solution.

Pachuca Tank

CIP tanks are connected by launders with screens
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CIP circuit

CIP circuit

Heap leaching can be considered as a percolation process on ore piles. The process is characterized for its economic cost against the agitated leaching process when the ore deposit has a low gold content. Typically, the process can process ores whose gold content is 0.8-1.1 g/t. The leaching solution is spread at the top of the pile and the pregnant solution will have to percolate through the pile. The design considers special drainage pads for pregnant liquid collection. The design is influenced by the manner of occurrence of the gold or gold host minerals, geological characteristics of the ore, and the volume of the deposit. Operations are conducted on ore stacked on impermeable pads. Special pad and piping systems are required to collect and transport de pregnant solution so that the losses of gold to the ground can be eliminated. Commonly, the materials used for constructing the pads are rock mixed with bentonite, asphalt mixed with gravel, reinforced concrete pads, and rubber covers on an excavated area.

There are two popular heap leaching designs, one is called short-term leaching of crushed ore, and the other is a long-term leaching of run of mine ore. The first one comprises one or two crushing stages previous to form the ore pile. Cyanide solution percolates through the heap leaching the gold and silver and is collected on the pregnant solution pad. The ore is crushed to a size that will give good liberation of gold minerals. In most operations with this crushing stage, the ore is crushed until two to three inches. A finer size can be considered if the ore needs fine liberation. The leach cycle is normally from 20 to 30 days. When the leaching cycle is complete, a new crushed ore is piled.

The second option is the most economical option and the ore is taken directly from the blasting. A typical ore size is six inches. A heap constructed under this design can treat high tons of material. Most heaps look like truncated pyramids 25 to 40 feet high. The height is in based on ore permeability, residual alkalinity, cyanide strength, and dissolved oxygen.

Pad Construction

The leaching solution is introduced onto the heaps by spraying from perforated plastic tubes, and by sprinkling using plastic sprinkler heads. The pregnant solution can be treated with activated carbon or zinc powder (Merryl Crowe process). The second is applied in many operations, but the final decision is based on the silver/gold ratio and economic considerations. Activated carbon does not recover much of the silver, but the gold recovery is high. In other words, the efficiency of the recovery process is influenced by the silver content.

Heap leaching process

Agglomeration:

Basically, this process can be used by small miners who are used to recover free gold particles by batch procedures. The process has been developed considering environmental aspect. It is well known that small miners employ mercury to recover free gold and part of this liquid metal is released to the environment. The process is an alternative to the amalgamation process. The agglomeration process is based on the formation of agglomerated particles with coal and is known as Coal Gold Agglomeration (CGA). This process was developed and patented by the British Petroleum research group and the key concept of the process is the formation of hydrophobic and oleophilic particles from slurries into agglomerates formed from coal and oil. The oil forms a link between gold particles and coal, and the last one acts as a carrier of gold particles. Agglomerates are recycled to increase their gold recovery and once they are almost saturated are separated burned, and smelted to get a gold ingot.

The most appropriate auriferous ores for the process are placers, old tailing deposits, and some gold with easy liberation after grinding. In these deposits, the gold must be free and fine. Then, it is necessary to verify this condition by doing mineralogical studies that must cover all the deposits to ensure their applicability in the project.

Agglomeration is a particular case of oil agglomeration. In this case, the agglomerates are formed in an aqueous system when a second liquid contacts a

hydrophobic particle like carbon. When there is stirring and mixing, the oil is extended on the surface of hydrophobic material and creates bridges among the particles, and the hydrophilic particles stay in an aqueous suspension. The CGA process for the treatment of auriferous ores is based on the natural hydrophobicity and ionophilicity of gold. This property is considered by some researchers as a form of easy superficial contamination.

Having an appropriate mixing condition and a specific oil/carbon ratio, it is possible to obtain agglomerates due to the interfacial tension of the oil and the capillary attraction of the oil bridges between particles. The next figure shows schematically the formation of coal-oil agglomerates and the contact with gold particles.

Formation of coal-oil agglomerates

The coal-oil agglomeration process combines one of the classic separations in the treatment of coal ores. The principle is to recover hydrophobic particles of gold by using an oily phase. The process consists in mixing the slurry with coal-oil agglomerates. The oleophilic particles penetrate the agglomerates which can be recovered by screening or flotation.

Geometallurgy must be applied at the moment of considering this process because there are important parameters to be considered at the moment of studying the applicability of the process. Some parameters are the following: the contact time of agglomerates with the ore, reagent dosage, and the ratio of carbon/ore.

CGA Flowsheet

An important characteristic is the fact that the rate of gold recovery is not affected by the agglomerate. The natural fluidity of the agglomerates allows that gold particles can be absorbed in the oil phase, which is 12-27% of agglomerate. Then, the rate of gold recovery is not limited by the metallic content of the product. The metallic content of agglomerates is influenced by the gold content, gold recovery, and carbon/ore ratio. For example, it has been determined that ores with 1 g/t of gold will form agglomerates with 1,050 – 1,550 g/t of gold. The recovery can be improved by adding surfactants. This action is similar to the conventional flotation.

When the agglomerates are formed with carbon particles smaller than 37 μm, the gold recovery reaches a maximum value due to a better mechanical strength among agglomerates. If the agglomerates have a bigger size, the adhesion

between oil and carbon will not be appropriate and the agglomerate will collapse. In general, the presence of sulphides does not affect the gold recovery due to the fact that gold is more hydrophobic than sulphides. However, there is point that affects slightly the gold recovery.

The auriferous ore is ground and later mixed with coal-oil agglomerates in mechanical tanks. The process can work in counter current, like a CIP plant, using screens for retaining the agglomerates and the slurry goes to the next tank. Alternatively, the ore and agglomerates can pass through several tanks so that the agglomerates can be recovered by flotation, and later can be recycled until reach a specific amount of gold.

The agglomerates are recycled to contact fresh ores and increase the gold content. In this way, the process is a development of spherical agglomeration for recovering fine particles by using coal-oil agglomerates. The agglomerates are burned to produce a product with high gold content or can be smelted to produce metallic gold. The process involves simple and known unitary processes: mixing, flotation, burning, and smelting.

The main advantages of the process are listed below:

High recovery of gold independently of the particle size, from 5 to 100 μm. The process let to the recovery of fine gold which is difficult to recover by gravimetric devices, and coarse gold can be recovered from gravimetric concentrates. Thus, the process is an alternative to amalgamation and cyanidation.

- The process can be employed on a small or big scale.
- The short time in reactors leads to lower capital costs.
- The reagents consumption is low which creates low operating costs. This is especially important when the cyanidation process has high costs.
- The recovery is not limited by the capacity of the carbon. Then the rate of gold recovery tends to be constant in time.
- It does not utilize cyanide or mercury. The process considers the environmental aspect

WE SHARE FUTURE LIMITED is considering using this process after analyzing all the pros and cons of each process

5.0 Major global trading hubs

The landscape for wholesale gold trading is quite complex and constantly evolving. The three most important gold trading centers are the London OTC market, the US futures market, and the Shanghai Gold Exchange (SGE). These

markets comprise more than 90% of global trading volumes and are complemented by smaller secondary market centers around the world (both OTC and exchange-traded).

5.1 The London OTC market

The London OTC market has historically been the center of the gold trade and today comprises approximately 70% of global notional trading volume per our estimates. The London market attracts participants from all around the world and sets the twice-daily global reference benchmark for gold, the LBMA Gold Price. Uniquely the market in London trades 400-ounce bars 'Good Delivery' bars which are stored in the member vaults of the London Precious Metals Clearing Limited (LPMCL) and the Bank of England. London's unique vaulting infrastructure with its strictly enforced chain of custody, as well as the sizeable stocks of gold that reside within it, contribute to London often being referred to as the 'terminal market'. The London market also enjoys a time zone advantage, bridging Asian and US trading hours, and benefits from its status as a leading global financial services hub.

Notwithstanding the London market's pre-eminence, it has been losing a relative share of global trading volumes. In 2015 banks operating in the market stopped submitting forward offered rates (GOFO rates) which were used to establish the market's forward curve, one of several symptoms of a market that has become increasingly fragmented. The World Gold Council's initiative to partner with a consortium of leading financial players and the London Metal Exchange to introduce LMEprecious is a direct response to these pressures. This suite of exchange-traded contracts seeks to modernize and introduce efficiencies to the heart of the gold trading market.

5.2 The US futures market (COMEX)

Despite London's leading role in the physical market, the COMEX derivatives exchange operated by CME Group has become an increasingly important venue in driving price discovery. Trading activity on COMEX is primarily concentrated on the 'active month' (nearest dated) contract which acts as a proxy for the spot price. Only a small number of contracts physically settle into the delivery of bars into COMEX vaults but the market is nonetheless tightly linked to physical markets through a very active Exchange for Physical (EFP) market. Notably, a

steadily increasing share of COMEX volume is transacted during Asian market hours reflecting the exchange's success of tapping into Asian market growth.

5.3 The Chinese market (SGE & SHFE)

The largest purely physical spot exchange in the world is the Shanghai Gold Exchange. Established in 2002 under close oversight of the People's Bank of China, SGE has enjoyed a rapid rise to prominence that has mirrored China's growing importance in the gold market. In 2016 SGE introduced the Shanghai Gold Price benchmark to cement China's role as a price-setter, to help the internationalization of the RMB, and to broaden international participation in the Chinese market. It should be noted that SGE's spot and deferred contracts are complemented by very active futures trading on the Shanghai Futures Market (SHFE), although the two exchanges are not directly linked.

Secondary market centers

Other important markets include Dubai, India, Japan, Singapore and Hong Kong. There are exchanges in all these markets offering a range of spot trading facilities or listed contracts but these have not attracted the liquidity seen on the market's primary venues. Nonetheless, these markets play an important role to varying degrees in serving local demand or acting as regional trading hubs. For example, Hong Kong has long acted as a gateway to the Chinese market and Singapore is establishing itself as an important focal point for trading in the ASEAN region.

6.0 2021 Gold Price Prediction, Trends, & 5-Year Forecast

So, while we take predictions with a grain of salt, let's look at what might be ahead for gold price in 2021 and the next 5 years.

Gold Price Prediction Chart

The table below shows the gold price prediction from various consultancies and independent analysts. Not all gave a forecast for both time periods, but what they've stated publicly. Here's what they think is ahead for gold.

Gold Price Predictions 2021 and Beyond		
	2021	Long-term
AG Thorson, CMT	$2,300	
Bank of America	$2,063	
Bloomberg Intelligence		$4,500
Capital Economics	$1,900	
CIBC	$2,300	
Citigroup	$2,100	
Commerzbank	$2,300	
CPM Group/Jeff Christian	$1922 Avg.	Significantly higher than $2,000
Credit Suisse	$2,200	
Edelweiss		$2,600-$2,800 in a few years
Frank Holmes/US Global		$4,000 in 2023
Goldman Sachs/Jeff Currie	$2,300	
iGoldAdvisor		Significant advance through 2023
Kitco News Survey/average	$2,300	
Kimble Charting Solutions		$3,000
Lyn Alden Advisor		An endgame that can shoot gold way past my model to the upside
Mark Mead Baillie/FX Empire	$2,401	
Metals Focus	$2100 or higher	
Peter Krauth	$2,300	
Ross Norman/Metals Daily*	$2,275	
PM Analyst Lawrence Williams	$2,225	

You can see that most analysts predict gold will exceed $2,000 per ounce in 2021. Two project it will average in the $1,900-range. And of those I found, all are very bullish long-term (though this survey is not exhaustive, as there are always analysts who are bearish).

6.1 The average price of gold in Tanzania

The average gold Price in Tanzania US$64, 8000 per Kg

6.2 Annual Production Capacity

The company is planning to produce 50Kg per year of processed gold

6.3 Cost of goods available for sale

The company has estimated the cost of goods available for sale plus other operating costs to be 60% of the total revenue

6.4 Market Potential

The market research conducted by **WE SHARE FUTURE LIMITED reveals** that there is a very big market potential for internationally to absorb the company's

products, the use of gold as the national reserve is increasing and the use of gold jewelry is increasing too

7.0 Project's Investment Capital

The estimated capital investment cost of the project is US$ 35,050,000.

WE SHARE FUTURE LIMITED COST STRUCTURE

PARTICULAR	
Land and Buildings	800,000
Machinery & Equipment	2,000,000
Motor Vehicles	1,000,000
Furniture & Fixtures	20,000
Pre-expenses	20,000
Others	10,000
Working Capital	1,150,000
TOTAL	5,000,000

7.1 Financing pattern

The project will be financed by US$5,000,000

8.0 Financial Analysis

8.1 Considerations and Assumptions:

The corporate tax charged is 0% of the profits for 8 years. The capital investment allowance is 50%. The capital assets are exempted from customs duty and Value Added Tax. The straight-line method to depreciate the project's capital items has been applied.

Revenues have been conservatively estimated based on the promoters' experience and industry trends.

8.2 Projected Profit and Loss Statement

The Income and Expenditure Statement shows the projected income for the 5 years. The position depicted is that the project earns profit throughout its life.

7.5 Projected Cash Flows

This is shown in the financial statements. The project has a positive end-of-year cash flow from the year

7.6 Projected Balance Sheet Statement

The projected shareholder's equity increases from **US$ 5,000,000** in 1st year to loan **US $ 7,429,345** in 5th

7.7 Projected payback period

Total investment is **US $ 5,000,000** cash accumulation in the third is more than the initial investment

8.0 Economic Aspects

Implementation of this project will have the following social and economic values

- The project is an ideal option for utilization of the available gold mineral resources
- The project will create employment for 80 people on a permanent contract basis as well as on a temporary basis.
- It will create more business opportunities to local suppliers which will also have a economic trickledown.
- It will generate substantial revenue to the government in the form of corporate tax, value added tax and pay as you earn.
- The project will have transfer of knowledge and skills to gold process management
- Increase of foreign currency

9.0 Implementation

Project implementation is expected to be relatively very short once the project has been approved it is estimated to be completed within one year: -

WE SHARE FUTURE LIMITED IMPLEMENTATION

S/N	ACTIVITY	PERIOD
1	Processing TIC Certificate of Incentive	August 2024
2	Placing order of machines	Sept– Oct 2024
3	Installing machines	Nov-Dec 2024
4	Recruitment	Jan 2025
5	In house training	Feb-March 2025
4	Testing production	April- May 2025
6	Commercial operations	June 2025

10.0 Conclusion & Recommendations

The project is technically feasible, financially viable, and economically sound, provided the sponsors will manage it efficiently.

It is recommended that the project be approved by Tanzania Investment Centre and be granted the TIC Certificate of Incentives with its associated privileges and benefits as provided for under the Tanzania Investment Act, 1997.

WE SHARE FUTURE LIMITED COST STRUCTURE

Land and Buildings	800,000
Machinery & Equipment	2,000,000
Motor Vehicles	1,000,000
Furniture & Fixtures	20,000
Pre exp	20,000
Others	10,000
Working Capital	1,150,000
TOTAL	5,000,000

WE SHARE FUTURE LIMITED FIXED ASSETS US$

FIXED ASSETS US$ PROJECTED INCOME & EXPENDITURE STATEMENT (US$)

NAME OF ASSETS	1	2	3	4	5
Land and Buildings	800,000	784,000	768,000	752,000	736,000
Machinery, Tools & Equipment	2,000,000	1,980,000	1,960,000	1,940,000	1,920,000
Motor Vehicles	1,000,000	900,000	800,000	700,000	600,000
Furniture & Fixtures	20,000	18,000	16,000	14,000	12,000
Total	**3,820,000**	**3,682,000**	**3,544,000**	**3,406,000**	**3,268,000**
DEPRECIATION	**1**	**2**	**3**	**4**	
Land and buildings	16,000	16,000.00	16,000.00	16,000.00	16,000.00
Machinery tools & Equipment	20,000	20,000.00	20,000.00	20,000.00	20,000.00
Motor Vehicles	100,000	100,000	100,000	100,000	100,000
Furniture & Fixtures	2,000	2,000.00	2,000.00	2,000.00	2,000.00
ANNUAL DEPRECIATION	**138,000**	**138,000**	**138,000**	**138,000**	**138,000**

WE SHARE FUTURE LIMITED
PROJECTED INCOME & EXPENDITURE STATEMENT (US$)

	1	2	3	4	5
Revenue (Food & drinks)	4,620,000	4,851,000	5,093,550	5,348,228	5,615,639
Operating Expenses:	2,772,000	2,910,600	3,056,130	3,208,937	3,369,383
Profit before Depreciation &Interest	1,848,000	1,940,400	2,037,420	2,139,291	2,246,256
Interest	94,320	75,456	56,592	37,728	18,864
Depreciation	131,000	131,000	131,000	131,000	131,000
Gross Profit	1,622,680	1,733,944	1,849,828	1,970,563	2,096,392
Tax (30%)	486,804	520,183	554,948	591,169	628,917
Profit After Tax	1,135,876	1,213,761	1,294,880	1,379,394	1,467,474
Accumulated Profit	1,135,876	2,349,637	3,644,516	5,023,911	6,491,385

PROJECTED CASH FLOW STATEMENT US$

SOURCES:		1	2	3	4	5
Profit before interest and depreciation	-	1,848,000	1,940,400	2,037,420	2,139,291	2,246,256
Equity	5,000,000					
Loan	0					
Total Sources	5,000,000	1,848,000	1,940,400	2,037,420	2,139,291	2,246,256
Applications:						
Capital expenditure	3,820,000	-	-	-	-	-
working Capital &Others	1,180,000					
Cash	-	1,361,196	1,420,217	1,482,472	1,548,122	1,617,338
Tax	-	486,804	520,183	554,948	591,169	628,917
Sub total	5,000,000	1,848,000	1,940,400	2,037,420	2,139,291	2,246,256
Total applications	5,000,000	1,848,000	1,940,400	2,037,420	2,139,291	2,246,256
Accumulated cash		1,361,196	2,781,413	4,263,884	5,812,007	7,429,345

PROJECTED BALANCE SHEET US $

Fixed Assets	_	1	2	3	4	5
Opening balance	-	3,820,000	3,682,000	3,544,000	3,406,000	3,268,000
Additions	-					
Total Long-term Assets	-	3,820,000	3,682,000	3,544,000	3,406,000	3,268,000
Less depreciation	-	138,000	138,000	138,000	138,000	138,000
Closing balance	-	3,682,000	3,544,000	3,406,000	3,268,000	3,130,000
Working capital	3,820,000	3,820,000	3,820,000	3,820,000	3,820,000	3,820,000
Accumulated cash	-	1,361,196	2,781,413	4,263,884	5,812,007	7,429,345
Total assets	3,820,000	8,863,196	10,145,413	11,489,884	12,900,007	14,379,345
Financed by						
Equity	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Accumulated profit	-	380,786	801,702	1,264,095	1,769,378	2,319,036
Total equity	5,000,000	5,380,786	5,801,702	6,264,095	6,769,378	7,319,036
Total debts	-	-	-	-	-	-
Total equity and debts	5,000,000	5,380,786	5,801,702	6,264,095	6,769,378	7,319,036

WE SHARE FUTURE LIMITED PROJECTED PAYBACK PERIOD

Year	Profit After Tax	Depreciation	Total Cash Flow	Accumulated Cash Flow
1	6,274,800	700,000	6,974,800	6,974,800
2	12,957,840	700,000	13,657,840	20,632,640
3	20,069,532	700,000	20,769,532	41,402,172
4	27,631,309	700,000	28,331,309	69,733,481
5	35,665,674	700,000	36,365,674	106,099,155
6	45,596,258	700,000	46,296,258	152,395,412