

# MATONGO GOLD MINES LIMITED

## PROPOSED BUSINESS PLAN

### FOR

## GOLD MINE PROCESSING PLANT IN TARIME DISTRICT, MARA REGION, TANZANIA.



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APRIL, 2022

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## List of Abbreviations

4WD – Four Wheel Driver  
CAPEX – Capital Expenditure  
CIF- Central in Flight  
CIL – Carbon in Leaching  
CIP- Carbon In Pulp  
EU – European Union  
GDP – Growth Domestic Products  
IRR – Internal rate of return  
Kg – kilo gram  
LTD - Limited  
MIS - Management Information System  
MT – Metric Ton  
MW – Mega Watts  
TAUWASA- Tarime Urban Water Supply Authority  
NBS – National Bureau of standard  
NEMC – National Environment Management Council  
OPEX – Operating Expenditure  
SIDO- Small Development Organization  
SWOC – Strength Weakness Opportunity Challenge  
TANESCO – Tanzania Electric Supply Company  
TIC- Tanzania Investment Centre  
TZS – Tanzania Shilling  
UK – United Kingdom  
US\$ - United State Dollar  
USA - United state of America  
VAT – Value Added tax  
VETA - Vocation Education Training Authority

## EXECUTIVE SUMMARY

Tanzania is endowed with vast quantities and types of resources whose extraction has been central to the country's economic growth. Mining is one of the leading sectors in Tanzania, with the value of mineral exports increasing each year. Leading minerals include gold, iron ore, nickel, copper, cobalt, silver, diamond, tanzanite, tin, ruby, garnet, limestone, soda ash, gypsum, salt, phosphate, coal, uranium, gravel, graphite, and sand and dimension stones.

The mining sector depends on imported machinery and supplies, and investors can import capital goods at zero duty. There are significant opportunities for the in this sector especially to technology, machinery, and services. Mining companies have significant demand for better power alternatives as they currently rely on diesel generators. The Tanzanian Government encourages mining companies to procure local goods and services whenever possible, and many of the foreign mining executives would like to increase local consumption to support the Tanzanian economy.

The Major opportunities in mine includes; Establishment of gold refinery activities, Supply equipment and explosives, grinding media, mill liners, etc., under joint venture with Tanzanian entrepreneurs. In Tanzania there is a dichotomy between the large multinational mining companies and the artisanal miners. Matongo Gold Mines Limited will seek to exploit this dichotomy in exploration of gold opportunities by adding value to artisanal miners while not troubling the larger mining companies. The company will provide the following services: Exploitation and Development Surface Drilling, Exploration and development Reverse, Blast Hole Drilling, Weep Hole Drilling, and Provision of Shot Firing Services. Buying and selling of gold.

Matongo Gold Mines Limited is a Tanzanian company registered in Tanzania with COI No. 155795492 of 9<sup>th</sup> April in year 2022. The company intends to expand extraction work to her Primary mining Licenses (PML) at Nyabichune Village in Tarime, Mara region by purchasing heavy equipment's for extractions work.

This project proposal entails setting up mining extraction facilities using modern technology

The proposed integrated project is estimated to cost a total of US\$ 4,819,000 this including, own equity of US\$ 3,614,250 as proceeds from capital contribution of the project ,total loan debt of 1,204,750US\$ with 8% interest rate. The Current asset of US\$ 678,397 during the first year of operation and it increase as the project will be in full operation, fixed assets 4,109,000US\$ and total liquidity 1,212,958US\$ and will be implemented within 10 years.

The development of a large and complex project such as Matongo Gold Mines Limited is necessarily accompanied by multiple risks during all the phases of the project development, construction, operation and maintenance. The right approach to manage the project in a manner which is fairly and adequately address the multiple risks in a comprehensive as well as systematic manner is very important.

Based on the Impact Investment Index analysis, the company can develop projections that the project can deliver both value for money in the context of broad socioeconomic impact and return on investment while complying with governance requirements. In this regard therefore, Matongo Gold Mines Limited will promote the industrialization process in the country, create employment, attract new technologies, expand foreign exchange earnings and ultimately contribute substantially to the country's economic growth.

On the basis of all the analysis done on this Business Plan on all aspects of assessment on both SWOC Analysis, market analysis, risk analysis and the financial analysis, the proposed investment options in gold processing and additional value chain of gold as prescribed on this business plan have shown that the project is commercially viable. Nonetheless, Matongo Gold Mines Limited through professional consultative manner, will continue to find ways of implementing cost effective options given time and financial resources that will be made available. Financial analysis results show that when the construction of project facility is financed using a combination of equity debt ratio (25:75), it gives an IRR of about 14.63%. The computed IRR is well above Dollar market of the annual loan interest rate of (8.00%) which is technically interpreted that the project is financially viable. The payback period for the project is estimated at 7 years, which is within the range for this type of investment. Sensitivity analysis results also favor the project.

The whole process of production lines is looking at providing direct employment to at least 77 permanent jobs on full implementation and operation of the project. The industry is divided into 4 Departments; Administration (11), Finance Management (2), Maintenance (17) and Operation (8).

## **1.0. BUSINESS OVERVIEW AND BACK GROUND INFORMATION.**

### **1.1. Overview – Mining sector in Tanzania.**

Tanzania is endowed with vast quantities and types of resources whose extraction has been central to the country's economic growth. Mining is one of the leading sectors in Tanzania, with the value of mineral exports increasing each year. Leading minerals include gold, iron ore, nickel, copper, cobalt, silver, diamond, tanzanite, tin, ruby, garnet, limestone, soda ash, gypsum, salt, phosphate, coal, uranium, gravel, graphite, and sand and dimension stones. The United Kingdom is the largest foreign investor in this industry in Tanzania with other projects by investors from India, China, Kenya, USA, Netherlands, South Africa, Canada, Germany and Oman.

Tanzania is the 4th largest gold producer in Africa after South Africa, Ghana and Mali. The mining industry experienced an estimated 15.3 percent growth in the first quarter of 2020 compared to 10 percent growth during the same quarter in the previous year. There is an increase in mineral revenue collection from \$84.5 million in 2015/16 to \$202.7 million from July 2019 to April 2020<sup>1</sup>.

There have been a number of changes in the Mining industry and more expected due to the 2017 Minerals Act. The Government is trying to make the sector more attractive but there are still several punitive or restrictive regulations. The changes in the legislations have increased the royalties increasing from 4 percent to 6 percent and an introduction of 1 percent clearing fees on the value of all minerals exported from the country. Also, the new laws give the GoT an ability to acquire 16 percent of shares from major mining companies on free carrying basis. The amendments led to the establishment of Joint Venture Company known as Twiga Minerals Corporation Limited between the Government (16 percent shares) and Barrick Gold Corporation Company (84 percent shares); and payment of compensation of \$100 million from Barrick Gold Corporation Company as initial settlement of the agreed \$300 million.

In recent years, mineral exploration has increased in several parts of the country. The sector has attracted substantial new foreign investment in mineral development exploration, with local investment surpassing \$1 billion. Recent nickel, helium, graphite, uranium and coal finds have spurred increased interest on the part of investors.

### **1.2. Sub-Sector Best Prospects**

The mining sector depends on imported machinery and supplies, and investors can import capital goods at zero duty. There are significant opportunities for the in technology, machinery, and services. Mining companies have significant demand for better power alternatives as they currently rely on diesel generators. The Tanzanian Government encourages mining companies to procure local goods and services whenever possible, and many of the foreign mining executives would like to increase local consumption to support the Tanzanian economy. There is significant opportunity to supply foodstuffs, clean water, training, consultancy and other services. With an unreliable power grid and rail system, alternative energy and transport solutions are also in high demand.

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<sup>1</sup> <https://www.trade.gov/country-commercial-guides/tanzania-mining>

The Major opportunities includes; Establishment of gold refinery activities, Supply equipment and explosives, grinding media, mill liners, etc., under joint venture with Tanzania entrepreneurs, Establishment of value-added activities, Rock and mineral carvings, Jewelry manufacturing utilizing gold and gemstones, Mineral processing industry e.g smelters, New areas in mineral exploration and Drilling.



Currently in Tanzania there is a dichotomy between the large multinational mining companies and the artisanal miners. MATONGO GOLD MINES LIMITED will seek to exploit this dichotomy in MINING EXTRACTION PROCESS AND ADDITIONAL VALUE CHAIN OF GOLD; it will operate in a way that will add value to artisanal

miners while not troubling the larger mining companies. The company provides the following services: Exploitation and Development Surface Drilling, Exploration and development Reverse, Circulation Drilling, Grade Control Drilling, Blast Hole Drilling, Weep Hole Drilling, and Provision of Shot Firing Services.

### 1.3. Project concept in Mara Region

The proposed aimed to expand her mining exploration services by purchasing modern machines for the following activities; Exploitation and Development Surface Drilling, Exploration and development Reverse, Circulation Drilling, Grade Control Drilling, Blast Hole Drilling, Weep Hole Drilling, and Provision of Shot Firing Services. However the company is already involve in purchasing of said Exploration services equipment's as will result of the significant investment in Tanzanian operations, the company is looking to register at the Tanzania investment Center. For that purpose, this business plan is prepared to outline the required information about the company and the operations being conducted for the Tanzania Investment Centre only. It is to be considered private and confidential.

The company main office is located in Nyarero area, Tarime District, Maara region in Tanzania. The company will be established services plant for mining exploration in Nyabichune village, in Mara region. Whereas the yard is already secured with necessary exploitation facilities and elution services. Other major capital expenditure will involve procurement of workshop tools and equipment, modern processing machines and equipment; purchase of utility motor vehicles, furniture and fittings, and fencing of the project sites:

### 1.4. The company objectives include the followings;

- i. To carry on the business of mining explorations which includes drilling, blasting, earth movers and miners and subsidiary activities.
- ii. To tender for and enter contracts of manufacturing, procurement, and supply of

- equipment and machinery in the industry.
- iii. To carry on the business of importers and exporters of heavy plant and equipment.
  - iv. To deliver end to end solutions for any mining, transportation, milling, processing, and waste management activities.
  - v. To carry out technical support activities, technical testing and analysis, technical consultancy, and repair of machinery to other mining establishments as per class 0990 of ISIC, Revision 4, Class 7120 of ISIC, Revision 4, Class 7140 of ISIC, Revision 4 and Class 3312 of ISIC Revision 4 respectively.

### **1.5. Project setup Nyabichune village – Tarime.**

The project proposal entails setting up yard for drilling facilities, providing testing mineral facilities so that project may equipped of all laboratories facilities from using modern technology. The project will be created in the said site above. The proposed project will therefore involve the following activities:

- ❖ Additional Acquisition of adequate mining sites to ensure maximum production of final mining products
- ❖ Development of processing camps and infrastructure
- ❖ Construction of laboratories building, storage warehouses, workshops and offices,
- ❖ Importation and installation of mining processing plants, laboratory for noble metal testing,
- ❖ Procurement and installation of environmental protection plant equipment,
- ❖ Importation and installation of equipment, machinery and plants for mining processing
- ❖ Procurement of heavy duty trucks fleet for transportation of mining and tailings from the small scale mining centers to the processing site in Tarime township area, Mara region. Other utility vehicles will also be procured for the project. This will include pickups, 4-WD station wagons to facilitate movement. Armored vehicles will also be procured for transportation.
- ❖ Purchase of furniture, equipment, fittings and administration motor vehicles, fencing of the factory compound and storage yard.

## 2.0. PROJECT OVERVIEW

### 2.1. Project description

MATONGO GOLD MINES LIMITED is a Tanzanian company registered in Tanzania with certificate of incorporation number 155795492 of 9<sup>th</sup> April in year 2022 , Taxpayer Identification Number 155 795 492 with a valid business license number 25709 issued by Tarime District council, Mara Region.

The main office of the company is located at Nyarero Road; Tarime District, Mara region, Tanzania. The anticipated project site will be located at Nyabichune village (mining site), Tarime District, Mara region in Tanzania. The permanent address is P O Box 2 Mwanza. The project is site in just 49Km to Tarime Township.

The company intends to expand extraction work to her Primary mining Licenses (PML) in Nyabichune Village in Tarime District Mara Mining sites by purchase heavy equipment's for extractions work. This project proposal entails setting up mining extraction facilities using modern technology. The proposed project will therefore involve the following activities:

- ❖ Acquisition of adequate mining sites to ensure maximum production
- ❖ Development of camps and infrastructure
- ❖ Construction of buildings and storage warehouses, workshops and offices
- ❖ Procurement and installation of environmental protection plant equipment
- ❖ Importation and installation of equipment, machinery and plants,
- ❖ Procurement of heavy duty trucks fleet for transportation of mining materials and building materials,
- ❖ Purchase of furniture, equipment, fittings and administration motor vehicles, fencing of the factory compound and storage yard.

The initial Authorized Share Capital of the company is TZS 500,000,000/= divided into 200 ordinary shares of TZS 2,500,000/= each and the company have the power to divide the original or any increased capital into several classes, and to attach thereto any preferential, deferred, qualified or other special rights privileges, restrictions or conditions. Unless the conditions of issues shall otherwise expressly declare, every issue of shares, whether preference or otherwise, or any such rights, privileges or conditions shall not be altered or modified except in accordance with the registered Articles or Association. The liability of the members is limited and the following names compromise the company ownership and principal shareholding as illustrated on Table 1 below.

**Table 2.1. Company Ownership and Principal Shareholders**

| S/No. | Shareholder's Name                       | Address   | Occupation of Subscriber   | Number of Shares |
|-------|--|---|--|------------------|
| 1.    | MR.HUSSEIN ABDULSULTAN NATHOO (TANZANIA) | PLOT NO 480, KAWE LOW DENSITY AREA, P O BOX 7240, DAR ES SALAAM, TANZANIA | Private Company By Share, Domicile In Tanzania- Incorporate Number 155795492 | 57               |
| 2.    | MR.SHIRAZ HUSSEIN KARMALI (TANZANIA)     | PLOT NO. 4 BLOCK K, NASSER DRIVE, HOUSE NO.1, P O BOX 2,                  | Private Company By Share, Domicile In Tanzania- Incorporate Number           | 28               |

|    |  |  |  |    |
|----|--|--|--|----|
|    |  | MWANZA, TANZANIA   | 155795492  |    |
| 3. | MR.WILLIAM SAMSON MRUGA (TANZANIA)     | , PLOT No. 18, HOUSE No.65, P O BOX 1026, MUSOMA, MARA, TANZANIA | Private Company By Share, Domicile In Tanzania- Incorporate Number 155795492 | 10 |
| 4. | MRS. SOPHIA ELIAKIM MHONZWA (TANZANIA) | NORTH BUSWELU, ILEMELA DISTRICT, P O BOX 11989, MWANZA, TANZANIA | Private Company By Share, Domicile In Tanzania- Incorporate Number 155795492 | 5  |

## 2.2. Business Plan Objectives

The objectives of this study are three-fold. First is to determine the viability of the proposed project and serve as a business plan for the company's development program. Secondly, the business plan will act as a supporting document in the company's application for Tanzania Investment Centre (TIC) Certificate of Incentives so as to access exemptions on duties, VAT deferments and other benefits and protections as statutorily provided for under Tanzania Investment Act (1997).

Thirdly, it will be presented to Banks/Financial Institutions for application of Term Loan 1,204,750US\$ to support smooth implementation and running of the proposed projects. The project promoters have commissioned a reputable engineering and project planning consulting firm to advice on detailed technical and economic evaluation of the project and in determining its viability. As the report will be used to raise debt financing for the project, it is tailored to meet standard requirements of financial institutions in the region.

## 2.3 Project Technical aspect - Mineral exploration:

### 2.3.1. The 3 Main Techniques

Mineral processing, also known as mineral exploration drilling, is a form of drilling often used by the mining industry. It's a process that allows them to determine the material composition of soil in different locations. This is a preliminary to major mining operations, one used to discover mineral-rich drilling sites and ore deposits. During the drilling procedure, sample of the soil at different depths is analyzed by geologists to determine if valuable minerals or other resources are located along the drilling line.

There are three main techniques for mineral exploration drilling. These are:

- ❖ Conventional Rotary Air/Mud Drilling,
- ❖ Reverse Circulation Drilling,
- ❖ And Diamond Core Drilling.

In this business plan, we'll have a look at all three of these techniques and discuss their strengths and weaknesses.

## **A. Conventional Rotary Air/Mud Drilling**

The most cost effective drilling technique is conventional rotary drilling. This can be done in a few different ways. Remember that the goal of this drilling is to lift material to the surface so that it can be tested to determine the mineral composition. Two common ways of lifting are with air and with mud. In this instance, mud is a thickened liquid compound that fills the hole and displaces the material loosened by drilling. Cuttings are then take from the side wall and tested in the laboratory to determine the mineral composition.

The challenge with this form of drilling is that it is inaccurate when it comes to mineral exploration drilling. You want to know what minerals exist at each depth. But, with this form of drilling, loose material from above the cutting can fall down and contaminate the sample. You might not get an accurate representation of the soil composition at that depth. This being said, it may be worth it to go this route if you're working with a very large area. Your expenses will be much less than some of the other forms of drilling, and you'll get a reasonable assessment of the soils composition at different elevations.

## **B. Reverse Circulation (RC) Drilling**

The benefit of reverse circulation drilling is that it will give you a more accurate understanding of the soil composition at any given depth. However, it will cost you a bit more per meter than conventional drilling. This is the most popular method in Australia and South America, where deep minerals are the most valuable export materials of the country.

For reverse circulation drilling, a dual wall drill pipe is used. Air is forced down the outer tube and injected through a port called a "side inlet swivel". It exits just after the drill bit to force material up through the inner tube. This material is delivered upwards and collected. It can then be analyzed to get a profile of the mineral composition at the drilling depth. The bit type can be a hammer or tricone, but, in either case, the results are the same. You will get a clear idea of the soil composition. Reverse circulation drilling is effective until the drill head hits water or "waters out". At this point water will enter the side inlet swivel, making it ineffective for mineral drilling exploration.

## **C. Mining Core Drilling**

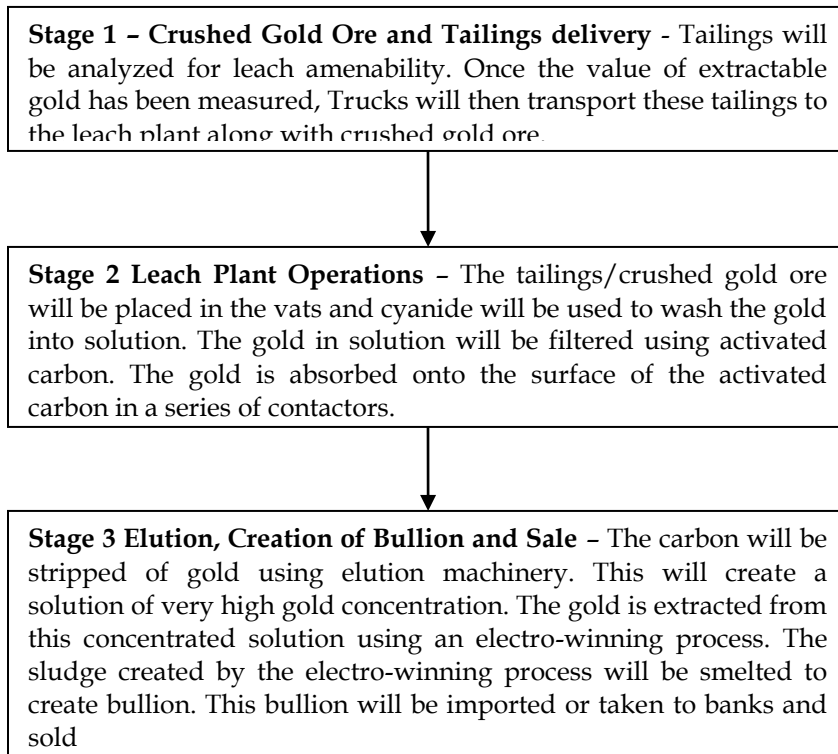
The most accurate form of mineral drilling, and the most expensive, is diamond core drilling. This method also requires the most skill. The cost per meter is quite high, even compared to reverse circulation drilling. It's also slower. You can get depths of 30 meters in 12 hours, compared to 150 meters with reverse circulation drilling. The core has to rotate at a very high rate, from 300 to 1200 rotations per minute. It also requires just the right amount of weight on the bit in order to avoid polishing or burning the bit in hard rock formations.

The advantage of core drilling is that you can bring a core of material to the surface. This will give you a more accurate profile of the mineral composition at each depth than any other style of drilling. There are two main types of core drilling: conventional and wire line. With conventional drilling, rotary drilling is used with a hollow core drill bit to capture a sample and bring it up to the driller. Samples are placed in jars and sent back to the lab for analysis. Wire

line coring is done with an ICB that is passed through the drill bit and overshot from the head. It requires fewer round trips and can be more efficient, but it limits the core size. Drilling is an art, regardless of the method used. The driller has to match weight and rotation to resistance. Plus, it requires heavy equipment in good repair. If you'd like to get an estimate on a drilling operation or look into what you need to do for mineral exploration, feel free to contact us. We are one of the top mineral exploration drilling companies on the local market. We'll provide you a solid soil profile to make sure that your structure is set on a good foundation.

### 2.3.2. Project Technical aspect - Gold processing techniques

The business will be broken down into three stages or “gold flows”. The first stage will be that of the delivery of crushed gold ore and tailings to the leach plant. The second stage will be the leaching process that will take place at the leach plant. The third stage will be the elution of gold and creation of the bullion that will be sold to the banks or imported.



#### A. Logistics and Crushed Ore/Tailings supply

The first stage in the process of creating the bullion will be the sourcing of the gold ore/raw tailings to be processed. Scouting will be carried out and samples taken from piles in various areas around the leach site. These samples will be analysed to measure their leach amenability and their effective value to the company. Once this has been done, the trucks will be organized to collect the gold ore/tailings and take them to the leach plant site. Gold ore will then be crushed by company crushers at the processing site.

During the startup phase, only a few trucks will be required to fill the small number of tanks available. As the tailings in the immediate vicinity are exhausted and as there are more vats created for leaching, a larger transport capacity will be required to maintain the gold flow capacity. Once the plant is operating at full capacity, 4 dumpers truck should be sufficient for supplying the plant with the required amount of gold ore and tailings.

One important factor will be to build up and maintain an on-site gold ore and tailings stock pile. This will ensure a steady and reliable flow of crushed ore and tailings to the vats. There will always be occasions when roads are made impassable by bad weather, or when trucks are being serviced or repaired. It would be wise to maintain a pile of at least 300T of gold ore and tailings at the site. During the wet seasons it may be reasonable to increase this stock pile to 500T per day.

## **B-Static Leaching and the Cyanidation process**

### **The Cyanidation Process**

The company plans to use Carbon In Pulp (CIP) gold processing technology, thus will import equipment to create processing capacity of CIP plant at site. The technology along with other mining equipment will be imported. For the carbon regeneration plant and electro-winning, the company plans to start bringing the equipment in as soon as they receive TIC accreditation and approval of tax exemptions.

The CIP method is a relatively technical method used by all the large mines today. It involves creating ore slurry and directly contacting the activated carbon with the gold containing slurry in an agitated environment. Although the amount of gold extracted is high, the equipment is expensive and complicated to maintain and operate.

Heap leaching is used to extract gold from large volumes of low grade ores. It is a very simple process with low costs of operation that allows large quantities of ore to be treated. It involves creating large drainage pads where ore can be piled. Cyanide solution is then sprayed onto the ore pile. This solution percolates through the ore pile dissolving the gold present. The solution is then collected at the base of the pad where carbon is used to absorb the gold from solution. The main advantage is the extremely low cost of operation. No agitating, moving or separating equipment is required. The method for gold extraction proposed by M/s Matongo gold mines Plants LTD is much like a heap leaching operation but has a slightly different characteristic.

## **C.The Leach Plant Process**

The leach plant schematics can be seen below. The crushed ore and tailings are brought to the plant in trucks and offloaded adjacent to the concrete vats. The Tailings are mixed with hydrated lime and placed into the vats. The hydrated lime optimizes the conditions for gold extraction and reduces the loss of cyanide by hydrolysis.

This improves gold extraction. Once the crushed ore/tailings have been soaked, the tap is opened and solution is allowed to percolate through the crushed ore/tailings dissolving the gold in its path. The solution flows through a filter at the base of the vat that keeps the tailings in the vat.

The gold bearing (pregnant) solution flows out of the tank and into the clarifier. This removes any unwanted solid particles in the clear solution. This solution is then pumped through a series of carbon columns or contactors. The carbon adsorbs the gold from the pregnant solution. Barren solution then flows out of the columns and into the barren tank.

Water and cyanide are added here to maintain the balance in the closed system. Oxygen, a key reactant in the process is added in the barren tank by using a pump to aerate the solution. The barren solution containing the cyanide is then pumped into the newly filled vat and the solution cycle starts again.

After 3-5 days of solution flowing through the tailings the gold will have been extracted. The exhausted crushed ore/tailings in the tank are now washed with water and drained. The tank is then emptied and the tailings are moved to the tailings dump site.

Once the gold has been absorbed by the carbon, the carbon is removed and replaced with fresh carbon. The loaded carbon is then sent to the elution plant for extraction/stripping.

## **2.4. Technical Characteristic of the project.**

### **2.4.1. Project Location and site analysis**

Based on physical inspection of the proposed site at Nyabichune village, the availability of basic and essential industrial infrastructure such transport, water supply, effluent disposal, electric power supply, telecommunication system and security were all checked out and are ok for factory establishment. The realization of the project development requires successful completion of a number of necessary activities and facilities to enable a successful development of the project. The project location is already installed necessary utilities such as reliable supplies of energy, water, transportation, telecommunications services, waste disposal and other services are in place.

### **2.4.2. Buildings and related fixed cost**

The floor plan and elevation of buildings and other related structures will be rehabilitating to Matongo Gold Mines Limited as rented at Nyabichune New industrial area by the owner. However, the total major rehabilitation of the yard and buildings, Storage of raw materials and finished processing a structure, the estimated cost of buildings 75,000US\$, the cost includes rehabilitation of administration building and offices, Laboratories, storages of chemicals and spare parts, workshop, and camp. The industry also set budget as working capital which involves purchase of raw materials and factory overhead cost of 250,000US\$. The minor

rehabilitations costs are inclusive of contingency and reflect prevailing cost of building materials and other cost.

### **2.4.3. Machinery and Equipment.**

Proper machinery selection is one of the key problems in the development of an industry. The machinery must suit the two-fold requirements of the developing countries, i.e. it should be up-to-date to allow for competitive production. In view of the foregoing, an effort has been made to choose from modern technological alternatives, a level that strikes a balance between fixed costs based on depreciation and variable costs based essentially on wages.

The requirements of various items of equipment have been worked out taking into consideration the production programs, average equipment utilization and normal productivity level of an average worker etc. While working out details of equipment required, it has been assumed that the plant will be working in a double shift of 16 hours a day, 25 days a month or a total of 300 days a year.

The projects machinery and equipment will be sourced from Europe and are estimated to cost 3,584,000US\$, this includes, 3 Excavator - Caterpillar 320DL, 2 Back hole Loaders, 2 Loaders, 4 dumper trucks, 2 bulldozer, 3 motor graders, 2 trailers others machines and equipment in place includes, blast hole drilling (Atlas copco blast hole ring), surface diamond RC drilling (Atlas corco CS14C – 2, Atlas corco C3001 – 2, LP90D Truck Mounted – 2 EDM Multipurpose HC2000-1, Unicor YDX-3L Track Mounted -1, Alton HD9000 Drill rig -1, CD800MP – Air Core/DD -1), Underground Drilling (Boart Long year LM 90 drill rig -1, Boart Long year LM 30SS drill rig -1).

The total cost of machineries and equipment's is estimated to 3,589,000US\$, these cost assumptions are C.I.F Dar es Salaam and include installation, commissioning, consultancy, port charges and transport to the project site. Calculated depreciation of machines and other working facilities is estimated to cost 108,134US\$ and increases tremendously.

### **2.4.4.. Motor Vehicles**

2 supporting trucks worth 300,000US\$, Lighting trucks 2 worth 100,000US\$ will be purchased to this project totaling to 400,000US\$

### **2.4.5. Furniture & Fittings and computers**

This cost item includes the purchase of various office furniture: tables, chairs cabinets, safes, telecommunication gadgets, firefighting equipment, air conditioners etc. A budget of 10,000US\$ will be allocated from general administration budget for furniture fittings and computer accessories. The total budget for furniture and fittings is small due to nature of industry as few or minor requirement of furniture and fittings.

### **2.4.6. Pre-Operational Expenses**

Under pre-operational expenses are considered costs like company formation, preliminary project studies, business plan preparation costs, licenses, permits and authorization, including

processing of TIC Certificate of Incentives, and legal fees, travelling expenses, initial recruitment and training expenses, and interest accrued during project construction period. Budget allocated for this is 450,000US\$

#### **2.4.7. Initial Working Capital**

This item will mainly cover initial imports of raw materials estimated to last for the first three months of operations. Otherwise, raw materials will generally be maintained at one month's stock and debtors at one month's sales volume constitute the biggest portion of current assets. Trade credits will be 15 days for the items listed. The initial working capital allocated budget is 250,000US\$.

#### **2.4.8. Project Financing**

The project costs, including fixed costs (machinery, equipment, building renovations, motor vehicles, office furniture and equipment and pre-operation expenses will be financed by a combination of bank term loan and shareholders own resources. Working capital requirements will be financed by short term bank financing in form of overdraft facility. The project promoters are planning to finance project cost in the following pattern:

#### **2.4.9. Project Implementation**

Full implementation of the project is planned to take place by early May, 2022. Machineries and motor vehicles will be imported immediately while construction/renovation works are in process.

#### **2.4.10. Auxiliary Materials/ services**

Falling under this category is packing bags, paper for bags for bran, lubricants, grease and other miscellaneous items.

**Utilities and service facilities that will need to be provided in this plant are as follows:**

- (i) Workshop
- (ii) Electric power
- (iii) Water supply
- (iv) Miscellaneous facilities {Canteen; First Aid Kit, Storage and transport and Office Facilities}

##### **(i) Workshop**

It is necessary to make provision for a small workshop in the plant premises so that certain maintenance operations could be carried out following sudden breakdowns and major routine matters. The facility will comprise of necessary machines like small centre lathe, drilling machine, welding set, soldering and gas-cutting equipment including complete electrical kit to take care of necessary electrical maintenance as well as to replace worn-out parts and periodic oil and greases needs for the plant. Equipment provision has been restricted to the minimum.

##### **(ii) Electric Power and Generator**

The proposed site will be supplied with industrial production 3-phase standard power supply from Tanzania Electric Supply Company (TANESCO), the electricity is available through the National Grid Line from Mwanza to Mara Region. As part of an alternative power supply, the company is already installing a heavy duty 100KVA power generator automated generator in place to a premises for standby power supply.

### **(iii) Water Supply**

Apart from the needs of electric power, water is also required for the actual process and other social needs. The proposed site has close to Tarime Urban water supply and Authority “TAUWASA” water network, the agency is major supplier of water to urban and peri urban area in the region. The main line from this source will be tapped and let to the land site and water collected in an overhead reservoir provided at the top of the building of the plant. Adequate provision has been made in the project cost for the overhead tank and supply and laying of pipelines etc.

### **(iv) Miscellaneous Facilities e.g. First Aid Kit, Storage and Transport, Office Facilities etc**

- Provision has been made in the project costs for necessary facilities for external telephones and fire alarm system;
- Sickness and ill-health are recognized to be among the cause of absenteeism and low morale leading to decreased production, increased waste and bad employee-management relations. Therefore, necessary provision has been made for the canteen and first aid facilities in case of accidents, sudden sickness etc.
- Necessary provision for furniture and office equipment has been made in the Capital Cost estimates.
- Provision has also been made for the various types of weighing equipment in various sections for material-handling equipment etc.

#### **2.4.12. Warehousing and distribution**

The Matongo Gold Mines Limited’s warehousing service is ready to meet 24/7/365 in provision of mining services and necessary material and chemicals imported. The efficiency of on-site combined with focal lift is already accommodated all needs and reduce supply chain costs. The industry uses electronics inventory management system means will ready for the efficiently movements of goods to next level.

The industry will use quick dispatch for fast distribution of final products and packed by manual means or by semi-automatic machines. The industry will take Extra care is therefore taken to make it hygienic so that the products do not get spoiled during storage.

#### **2.4.13. Waste management for industry**

In order to create a sustainable society, it is necessary to develop effective utilization of all sorts of wastes. One of the major wastes from our living is fiber wastes. Fiber wastes are generally divided to nonindustrial (organic chemicals) and industrial wastes (inorganic Chemicals)

In his strategic management for a Matongo Gold Mines Limited's; the industry has to move from an understanding of improvement at all costs to an understanding of continuous and balanced improvement once established. In modern times, environmental protection is being implemented not because it is enforced law, but as an administrative philosophy.

Rapid degradation in environmental conditions has changed at attitude of industrial managers toward ecological environment and had them consider ecology a significant factor while taking decisions related to industrial management. Parameters responsible for environmental pollution include chemicals discharged into air, water and soil as well as energy pollution all these will taken into consideration of the proposed project.

Noise pollution caused by poorly planned settlement programs is also included in this plan. Furthermore, safety and health of those working in production will be also taken into account by installing modern machines free from noise pollution.

### 3.0. MANPOWER AND SALARY BUDGET

#### 3.1. Employment

The whole process of production lines is looking at providing direct employment to at least 77 permanent jobs on full implementation and operation of the project. The industry is divided into 4 Departments; Administration (11), Finance Management (2), Maintenance (33) and Operation (8).

#### 3.2. Recruitment

Recruitment of the 41 persons will be carried out by giving first preference to ex-technician from our local technical institutes such as Vocation Education Training Authority “VETA” and employees of Matongo Gold Mines Limited in Tanzania, based on demonstration of skills and aptitude basis and their willingness to work for Matongo Gold Mines Limited. Careful methodology is being worked out by a competent management consultant who will set the job descriptions. To ensure that the right calibre is recruited. Recruitment of expatriate personnel will be carried out in consultation with the relevant authorities in Government and the collaborating agencies.

#### 3.3. Training and the use of Consultants

The Company plans to initially carry out on the job training for most of the technical staff to be dispatched to the project site by the suppliers of the plant which will be specified under sales agreement. In general the company will ensure that employees acquire new skills and procedures to increase their productivity fourfold. Educational materials will be subsidized or paid for to motivate the workers to develop themselves.

Whereas the company will endeavor to obtain the best talents to fill the permanent posts in the organization, it is intended where necessary, to continue with the policy of hiring out some specialized skills by way of consultants. Alternatively, those skills not required throughout the year will be left to consultants. These include legal counsels, systems and management consultants. To ensure efficient and scientific management, operational manuals will be prepared for the core functions of the company.

#### 3.4. Organization and Management

The project will be managed by qualified professionals given the vast experience that the promoters have acquired over years in running and managing similar businesses. The Board of Directors formulates policy and offer strategic business guidance to management and regularly monitor and evaluate performance of the company. All the production line will be under the administrator under which the day to day leader/management of production line will be vested in the management team headed by a Administrator. The Administrator is to be assisted by qualified and experienced personnel.

| S/No. | DEPARTMENT | STRENGTH /NUMBERS | MONTHLY SALARY US\$ | ANNUAL BUDGET US\$ |
|-------|------------|-------------------|---------------------|--------------------|
|-------|------------|-------------------|---------------------|--------------------|

|   |                                   |                  |               |                |
|---|-----------------------------------|------------------|---------------|----------------|
| A | <b>ADMINISTRATION</b>             |                  |               |                |
|   | HR Coordinator                    | 1                | 870           | 10,435         |
|   | HSE Manager                       | 1                | 783           | 9,391          |
|   | Office Administer                 | 1                | 652           | 7,826          |
|   | Chief Accountant                  | 1                | 652           | 7,826          |
|   | Project manager                   | 2                | 913           | 21,913         |
|   | House keepers                     | 5                | 109           | 6,522          |
|   | <b>SUB TOTAL</b>                  | <b>11</b>        | <b>3,978</b>  | <b>63,913</b>  |
| B | <b>FINANCE MANAGEMENT</b>         |                  |               |                |
|   | Chief Financial Officer           | 1                | 652           | 7,826          |
|   | Asst. Accountant                  | 1                | 326           | 9,999          |
|   | <b>SUB TOTAL</b>                  | <b>2</b>         | <b>978</b>    | <b>17,825</b>  |
| C | <b>MAINTAINANCE</b>               |                  |               |                |
|   | Boilermakers                      | 3                | 348           | 12,522         |
|   | Electrician                       | 2                | 391           | 9,391          |
|   | Senior Fitter                     | 2                | 370           | 8,870          |
|   | Fitter                            | 5                | 326           | 19,565         |
|   | Mechanics                         | 2                | 783           | 18,783         |
|   | Maintenances Planners             | 2                | 761           | 18,261         |
|   | ICT expert                        | 1                | 339           | 4,070          |
|   | <b>SUB TOTAL</b>                  | <b>17</b>        | <b>3,317</b>  | <b>91,461</b>  |
| D | <b>OPERATION</b>                  |                  |               |                |
|   | Driller supervisors               | 2                | 387           | 9,287          |
|   | Drillers                          | 6                | 239           | 17,217         |
|   | Drivers                           | 15               | 696           | 125,217        |
|   | Production Engineers              | 2                | 609           | 14,609         |
|   | Short Helpers                     | 2                | 196           | 4,696          |
|   | Sr. Short firer                   | 1                | 152           | 1,826          |
|   | Underground wheel loader operator | 2                | 1,174         | 28,174         |
|   | Utility worker                    | 5                | 522           | 31,304         |
|   |                                   | <b>SUB TOTAL</b> | <b>33</b>     | <b>3,587</b>   |
| E | <b>STORE AND LOGISTIC</b>         |                  |               |                |
|   | Logistic Liaison                  | 1                | 522           | 6,261          |
|   | Purchasing Coordinator            | 1                | 478           | 5,739          |
|   | Store supervisor                  | 2                | 348           | 8,348          |
|   | Store person                      | 4                | 283           | 13,565         |
|   | <b>SUB TOTAL</b>                  | <b>8</b>         | <b>1,630</b>  | <b>33,913</b>  |
|   | <b>GRAND TOTAL</b>                | <b>71</b>        | <b>13,491</b> | <b>430,156</b> |

## 4.0. PROJECT FINANCING AND CAPITAL INVESTMENT SUMMARY

### 4.1. Project Cost & Financing Pattern

The proposed integrated project is estimated to cost a total of US\$ 4,819,000 this including, own equity of US\$ 3,614,250 as proceeds from capital contribution of the project ,total loan debt of 1,204,750US\$ with 8% interest rate. The Current asset of US\$ 678,397 during the first year of operation and it increase as the project will be in full operation (see income statement), fixed assets 4,109,000S\$ and liquidity of 1,212,958US\$. The project will be implemented within 10 years.

### 4.2. Project Capital Investment Summary

| INVESTMENT SUMMARY - MATONGO GOLD MINES LTD |                                      |              |              |                        |
|---|--------------------------------------|--------------|--------------|------------------------|
| S/NO.                                       | CAPITAL ITEM                         | No. OF UNITS | UNIT MEASURE | OF ESTIMATED COST US\$ |
| NB  | ALL FIGURES IN USD                   |              |              |                        |
|   | <b>A. LAND AND BUILDINGS</b>         |              |              |                        |
| 1   | Land acquisition                     | 3            | PML          | 15,000                 |
| 2   | Buildings (administration block)     |              |              | 45,000                 |
| 3   | Store for chemical, spare parts, etc |              |              | 15,000                 |
| 4   | Parking Yard                         |              |              | 15,000                 |
|   | <b>SUB TOTAL</b>                     |              |              | <b>90,000</b>          |
|   | <b>B. MACHINERY EQUIPMENT</b>        |              |              |                        |
| 1   | Excavator - Caterpillar 320DL        | 3            | unit         | 750,000                |
| 2   | Back hole Loaders                    | 2            | unit         | 240,000                |
| 3   | Loaders                              | 3            | unit         | 360,000                |
| 4   | Dumper Trucks                        | 4            | unit         | 800,000                |
| 5   | Bulldozer                            | 2            | unit         | 400,000                |
| 6   | Motor Graders                        | 3            | unit         | 450,000                |
| 7   | Trailers                             | 2            | unit         | 400,000                |
| 8   | ICT equipment's and accessories      |              | Lump sum     | 5,000                  |
| 9   | Office Equipment                     |              | Office sets  | 4,000                  |
| 10  | Miscellaneous Tools and Equipment    |              | Lump sum     | 30,000                 |
| 11  | Standby Generator                    | 1            | unit         | 150,000                |
|   | <b>SUB TOTAL</b>                     |              |              | <b>3,589,000</b>       |
|   | <b>C. MOTOR VEHICLES</b>             |              |              |                        |
| 12  | Administrative Vehicles              | 2            | unit         | 100,000                |
| 13  | Utility Vehicles                     | 4            | unit         | 300,000                |
|   | <b>SUB TOTAL</b>                     |              |              | <b>400,000</b>         |

| D. FURNITURE      |                          |                 |           |
|-------------------|--------------------------|-----------------|-----------|
| 14                | Office Furniture         | set in lump sum | 10,000    |
| 15                | Contiguous / others      |                 | 30,000    |
| SUB TOTAL         |                          |                 | 40,000    |
| TOTAL FIXED ASSET |                          |                 | 4,119,000 |
| E. CURRENT ASSETS |                          |                 |           |
| 16                | Pre operational expenses |                 | 450,000   |
| 17                | Initial working capital  |                 | 250,000   |
| SUB TOTAL         |                          |                 | 700,000   |
| TOTAL INVESTMENT  |                          |                 | 4,819,000 |

| EQUITY + LOAN   |              |  |              |
|-----------------|--------------|--|--------------|
| 1               | LOAN (25%)   |  | 1,204,750.00 |
| 2               | EQUITY (75%) |  | 3,614,250.00 |
| TOTAL FINANCING |              |  | 4,819,000.00 |

## 5.0. RISK ANALYSIS

### 5.1. Risk Analysis

Risk is the probability that an event or action will adversely affect the organization. Risk assessment is the identification and analysis of risks associated with the achievement of operations, financial reporting and compliance goals and objectives. Risk management is a central part of the Matongo Gold Mines Limited. The Industry's management will determine the level of operations, financial and compliance risk they are willing to assume. Risk assessment is one of the Company's management responsibilities.

### 5.2. Macroeconomic risk analysis

Since early 1986, the government of Tanzania has launched a comprehensive economic policy and stabilization plan with the aim to enhance the amount of infrastructure construction and improve the lives of the poor. During this time the main economic indicators significantly improved. However, uneven development of various region in the country, lack of relevant infrastructure in transportation, telecommunications, networking, health facilities, electricity and water supplies have proven to be investment barriers. Overall, Tanzania has a weak economic foundation but the project can achieve a greater impact in attaining social and economic goals for the country.

### 5.3. Finance risk analysis

- a) **Supply Risk:** The risk in Primary production relates to supply of raw material, transportation and price fluctuations. There is no assurance of enough supply of raw materials in the local market instead mostly of raw materials are imported.
- b) **Processing Risks:** The technology, machines and equipment used in gold processing are in rudimentary stages all of which contribute to reducing production efficiency. Also quality/food safety and standards consideration in the production environment is limited. In gold processing facilities operation know-how is very low as there are notarized labourers.
- c) **Sales/market risk:** Placing value added products on the consumer markets bears risk of demand fluctuations and rejections through retailers. Furthermore, distributor are not aware of the selling price mostly are controlled by world market.

### 5.4. Other potential external risk

- a) **Lack of Governance:** the governance mechanism in the value chain is underdeveloped, actors operate in an uncoordinated and unorganized fashion, and if rules exist they are often ignored;
- b) **Lack of market coordination:** No lead organization has a coordinating role in relation to markets, technology and information such that producers and processors have no incentives for improving neither their product nor the chain process to promote sustainable income earning opportunities;

- c) **Unclear and conflicting roles regulatory authorities:** Regulatory Agencies are responsible for quality control as well as enforcing TBS, NEMC etc, are regulatory role in issuing licensing etc
- d) **Industry associations:** Associations are weak at all levels of the chain;
- e) **Operating procedures:** Standard procedures are inadequately enforced, or not enforced at all, because of relaxed production and trade regulations; and
- f) **Integration:** there is little vertical integration of importers, mid chain actors and processors.

#### 5.4. Mitigating potential risk

The development of a large and complex project such as Matongo Gold Mines Limited is necessarily accompanied by multiple risks during all the phases of the project development, construction, operation and maintenance. The right approach to manage the project in a manner which is fairly and adequately address the multiple risks in a comprehensive as well as systematic manner is to use the risk analysis and management methodology which identifies the risk issues and their instrumental cause. In this regard, the risk is eliminated or effectively managed by the party best suited with capacity to handle or deal with the risk factors.

## 6.0. ECONOMIC AND SOCIAL ASPECTS

The project is also likely to have a positive impact on the economy of Lake Zone regions and Tanzania as a whole by creating employment, and contributing to Government revenues through various taxes, which will be paid. It also has potential for substantial exporting to foreign markets especially to neighboring countries in the Great Lakes Region. In summary the following table will show impact investment index framework

### 6.1. Impact Investment Index Framework

| Impact Investment Index   |   |   |
|---|---|---|
| Frame Work for MATONGO GOLD MINES LIMITED   |   |   |
| Performance Area  | Quantitative Indicator  | Remarks   |
| Investment Capital  | Total investment capital, CAPEX and OPEX<br>US\$ 4,819,000US\$  | Substantial amount of capital invested into the domestic economy.   |
| Export Earnings   | Indicative Annual sales of earnings of 2,635,545US\$ out of annual average collection   | Increased foreign earnings.   |
| Job requirements  | Job creation after plant in operation 20201-2022.<br>DIRECT TANZANIAN JOBS<br>71 local employed and indirect employee over 200+, these includes suppliers of raw materials, transportations, telecommunications etc | <ul style="list-style-type: none"> <li>Reasonable number of direct job created to local Tanzanians with direct impact on poverty reduction through enhanced income generation; and</li> <li>Improving skills development for Industrial production</li> </ul> |
| Technology applied  | High Tech Environmentally friendly machinery  | <ul style="list-style-type: none"> <li>Enhancing technological transfer; and</li> <li>Applied technology which is free from environmental pollution,</li> </ul>   |
| <b>Other Implied Project Benefits</b>   |   |   |
| <ul style="list-style-type: none"> <li>Increased sales to the Utility Companies providing services of electricity, water and sewerage, telecommunications;</li> <li>Increased business transacted by local banks and institutions providing financial services;</li> <li>Business opportunities for local entrepreneurs in market distribution channels,</li> <li>Business opportunities to contractors and sub-contractors during the minor construction phase;</li> <li>Increased regional intra-trade and international trade due to better infrastructure facility and links to markets;</li> <li>Increase of technology transfer &amp; expertise to local employed staff,</li> <li>Capital spends in local economy over 4.819 Million US\$ Millions and</li> <li>Contribution to GDP growth through increased economic activities</li> </ul> |   |   |

Based on the Impact Investment Index analysis, the company can develop projections that the

project can deliver both value for money in the context of broad socioeconomic impact and return on investment while complying with governance requirements. In this regard therefore, Matongo Gold Mines Limited will promote the industrialization process in the country, create employment, attract new technologies, expand foreign exchange earnings and ultimately contribute substantially to the country's economic growth.

## 7.0. FINANCIAL MODELLING AND ANALYSIS

The Financial Modelling and analysis, is the main source of information for assessing the potential financial viability of the Matongo Gold Mines Limited. The analysis is based on the assumptions that have been taken for the implementation of the site development, demand and the associated potential investment requirements for a 10 years' time period. The purpose of establishing this project is to speed up the country's economic development by being a catalyst for restructuring the existing local industrial set up and attracting new, both foreign and domestic entrepreneurs to a liberalized legal business framework.

### 7.1. Project investment inputs and revenue projects

|  |                     |
|--|---------------------|
| <b>COMMISSION FROM CHARE CAPITAL AND SALES</b> |                     |
| Monthly gold production in Kilograms 2%        | 3.0                 |
| Annual production of gold                      | 36.00               |
| selling price per kg US\$                      | 36,796.54           |
| Annual commission from sales of gold Mining    | 1,324,675.32        |
| <b>COMMISSION FROM SHARED CAPITAL</b>          | <b>1,324,675.32</b> |
| <b>REVENUE FROM CONSTRUCTION AND HIRING</b>    |                     |
| Excavator - Caterpillar 320DL @ 3              | 234,782.61          |
| Back hole Loaders @ 2                          | 130,434.78          |
| Loaders @ 3                                    | 176,086.96          |
| Dumper Trucks @ 4                              | 260,869.57          |
| Bulldozer @ 2                                  | 130,434.78          |
| Motor Graders @ 3                              | 176,086.96          |
| Trailers @ 2                                   | 104,347.83          |
| Miscellaneous Tools and Equipment              | 78,260.87           |
| Standby Generator                              | 19,565.22           |
| <b>REVENUE FROM HIRING MACHINES</b>            | <b>1,310,869.57</b> |
| <b>GRAND TOTAL</b>                             | <b>2,635,544.9</b>  |

### 7.2. Production, Revenue and project viability

- ✚ The estimated revenue gain from sales and hiring equipment's services annually 2,635,545US\$ in the first year of production and increases in the second years.
- ✚ Net profit before tax is 3,374,3160US\$, second year earning is ten times to 32,510,878US\$, which show the profit is increasing, (see Income statement )
- ✚ Net profit after tax for the first years in production is 66,051US\$ and second year is increasing to 18MillionUS\$ for remaining year increasing positively, (see Income

- statement). But this first year of production the company had negative provision to shareholders (see balance sheet)
- + Gross sales contribution in the first year of service is quietly promising (see Income statement )
  - + The expected sales increase in a second year over 200%, this is due to the company will utilize all necessary machine and equipment during the operation of the project after imposed with additional loan facilities of 35,000,000US\$ at discounted rate of 8%
  - + Total investment cost of the project is 47,064,650US\$ whereas the own equity is 46.89% and loan-able amount 25,000,000US\$ (see investment summary)
  - + The end balance of project in cash flow statement is positive and increases tremendous.(see cash flow statement)
  - + The yearly loan payment schedule of project is 6,261,411.36US\$ for 5 year loan recovery schedule, the total interest for 5 years to bank is 6.3Million US\$ (see loan payment schedule)
  - + Testing the project viability is positive whereas IRR is positive 10.033% which is above bank loan interest of 8%, and payback period of project is within 4 years.
  - + Return on investment is positive and increases tremendously (see balance sheet)
  - + Breakeven point is positive from the first year of operation.

### **7.3. Objective and Scope of Financial Model**

#### **7.3.1. Objective**

The main objective of the financial modelling and analysis is to setup a financial model framework for potential generated revenues and operational & maintenance costs for the full operation of MATONGO GOLD MINES LIMITED based on the assumptions taken for the Market Analysis, the plan for the facility development, unit production costs and other overhead and operational charges.

#### **7.3.2. Scope**

The scope consists of a financial model that will be used to analyse the potential financial viability of the project based on the assumptions taken for the concept and scope of the project on the Market Analysis. The financial model has been developed in excel spread sheet and include information on costs, expenses and the subsequent sales revenue based on the average market prices and linked to the financial cash flow.

#### **7.3.3. Project financial plan.**

The project financial plan primarily consists of income statement, cash flow projection and balance sheet. From these 3 financial statements the project will derive Break even points, internal rate of returns, loan payment schedules, payback period and other financial ratios. These reports constitute reasonable estimate of company financial future. More importantly, the

process of thinking through the financial plan improves insight into inner financial working of company.

## ANNEX I – INCOME STATMENT

|  | 0 | Year 1    | Year 2    | Year 3    | Year 4    | Year 5    | Year 6    | Year 7    | Year 8    | Year 9    | Year 10   | TOTAL      |
|--|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| COMMISSION FROM SHARED CAPITAL                     | - | 1,324,675 | 1,390,909 | 1,460,455 | 1,533,477 | 1,610,151 | 1,690,659 | 1,775,192 | 1,863,951 | 1,957,149 | 2,055,006 | 16,661,624 |
| REVENUE FROM HIRING MACHINES & EQUIPT.             |   | 1,310,870 | 1,376,413 | 1,445,234 | 1,517,495 | 1,593,370 | 1,673,039 | 1,756,691 | 1,844,525 | 1,936,751 | 2,033,589 | 16,487,977 |
|  |   |           |           |           |           |           |           |           |           |           |           | -          |
| <b>Total Operating Revenue</b>                     | - | 2,635,545 | 2,767,322 | 2,905,688 | 3,050,973 | 3,203,521 | 3,363,697 | 3,531,882 | 3,708,476 | 3,893,900 | 4,088,595 | 33,149,600 |
| <b>Expected Expenses</b>                           |   |           |           |           |           |           |           |           |           |           |           |            |
|  | 0 | Year 1    | Year 2    | Year 3    | Year 4    | Year 5    | Year 6    | Year 7    | Year 8    | Year 9    | Year 10   | Total      |
| Salaries   |   | 430,156   | 443,060   | 456,352   | 470,043   | 470,043   | 484,144   | 484,144   | 498,668   | 498,668   | 513,628   | 4,748,905  |
| Social Charges & Pension Payments                  |   | 86,031    | 88,612    | 91,270    | 94,009    | 94,009    | 96,829    | 96,829    | 99,734    | 99,734    | 102,726   | 949,781    |
| Consumable goods - raw materials                   |   | 142,000   | 146,260   | 150,648   | 155,167   | 155,167   | 159,822   | 159,822   | 164,617   | 164,617   | 169,555   | 1,567,676  |
| Administrative expenses                            |   | 144,000   | 148,320   | 152,770   | 157,353   | 157,353   | 162,073   | 162,073   | 166,935   | 166,935   | 171,944   | 1,589,756  |
| Fuel and lubricants for machineries and generator  |   | 288,000   | 296,640   | 311,472   | 327,046   | 327,046   | 343,398   | 343,398   | 360,568   | 360,568   | 378,596   | 3,336,731  |
| Security services                                  |   | 86,400    | 88,992    | 91,662    | 94,412    | 94,412    | 97,244    | 97,244    | 100,161   | 100,161   | 103,166   | 953,854    |
| Work wear and other related facilities             |   | 120,000   | 123,600   | 127,308   | 131,127   | 131,127   | 135,061   | 135,061   | 139,113   | 139,113   | 143,286   | 1,324,797  |
| Insurance/licensing/health y premium/other charges |   | 36,000    | 37,080    | 38,192    | 39,338    | 39,338    | 40,518    | 40,518    | 41,734    | 41,734    | 42,986    | 397,439    |
| Utilities - Electricity and water services         |   | 60,000    | 61,800    | 63,654    | 65,564    | 65,564    | 67,531    | 67,531    | 69,556    | 69,556    | 71,643    | 662,398    |
| Other Costs  |   | 30,000    | 30,900    | 31,827    | 32,782    | 32,782    | 33,765    | 33,765    | 34,778    | 34,778    | 35,822    | 331,199    |
|  |   |           |           |           |           |           |           |           |           |           |           |            |
| <b>Total Operating Costs</b>                       |   | 1,422,587 | 1,465,264 | 1,515,155 | 1,566,839 | 1,566,839 | 1,620,385 | 1,620,385 | 1,675,865 | 1,675,865 | 1,733,352 | 15,862,535 |

|   |           |           |           |           |           |           |           |           |           |           |            |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| <b>Operational Net Earnings before Depreciation, Interest &amp; Tax</b> | 1,212,958 | 1,302,058 | 1,390,533 | 1,484,134 | 1,636,682 | 1,743,312 | 1,911,497 | 2,032,612 | 2,218,036 | 2,355,243 | 17,287,065 |
| <i>%age Gross Contribution</i>  | 46        | 47        | 48        | 49        | 51        | 52        | 54        | 55        | 57        | 58        | 1          |
| <b>Depreciation at12. 5% (Machines, Equipt.)</b>                        | 106,134   | 113,930   | 121,672   | 129,862   | 143,210   | 152,540   | 167,256   | 177,854   | 194,078   | 206,084   | 1,555,836  |
| <b>Net Earnings before Tax &amp; Interest</b>                           | 1,106,824 | 1,188,128 | 1,268,862 | 1,354,272 | 1,493,473 | 1,590,772 | 1,744,241 | 1,854,758 | 2,023,957 | 2,149,159 | 15,731,229 |
| <b>Interest Paid (Bank Loan)</b>  | 96,380    | 89,727    | 82,542    | 74,781    | 66,401    | 57,349    | 47,574    | 37,016    | 25,614    | 13,300    | 590,683    |
| <b>Tax (30%)</b>  | 332,047   | 356,438   | 380,658   | 406,282   | 448,042   | 477,232   | 523,272   | 556,427   | 607,187   | 644,748   | 4,732,334  |
| <b>Net Earnings</b>   | 678,397   | 741,963   | 805,662   | 873,209   | 979,030   | 1,056,192 | 1,173,395 | 1,261,315 | 1,391,156 | 1,491,112 | 10,451,430 |

## ANNEX II CASH FLOW

(all numbers in us\$)

|   | Year 1           | Year 2           | Year 3           | Year 4           | Year 5           | Year 6           | Year 7           | Year 8           | Year 9           | Year 10          |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b><u>CASH FLOW FROM OPERATING ACTIVITIES</u></b> |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Cash receipts from Sales                          | 2,635,545        | 2,767,322        | 2,905,688        | 3,050,973        | 3,203,521        | 3,363,697        | 3,531,882        | 3,708,476        | 3,893,900        | 4,088,595        |
| Cash paid to suppliers and employees              | (1,422,587)      | (1,465,264)      | (1,515,155)      | (1,566,839)      | (1,566,839)      | (1,620,385)      | (1,620,385)      | (1,675,865)      | (1,675,865)      | (1,733,352)      |
| Cash generated from operations                    | 1,212,958        | 1,302,058        | 1,390,533        | 1,484,134        | 1,636,682        | 1,743,312        | 1,911,497        | 2,032,612        | 2,218,036        | 2,355,243        |
| Dividends received*                               | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Interest received                                 | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Interest paid                                     | (96,380)         | (89,727)         | (82,542)         | (74,781)         | (66,401)         | (57,349)         | (57,349)         | (47,574)         | (37,016)         | (37,016)         |
| Tax paid  | (332,047)        | (356,438)        | (380,658)        | (406,282)        | (448,042)        | (477,232)        | (523,272)        | (556,427)        | (607,187)        | (644,748)        |
| <b>Net cash flow from operating activities</b>    | <b>784,531</b>   | <b>855,893</b>   | <b>927,333</b>   | <b>1,003,071</b> | <b>1,122,240</b> | <b>1,208,731</b> | <b>1,330,876</b> | <b>1,428,611</b> | <b>1,573,832</b> | <b>1,673,479</b> |
| <b><u>CASH FLOW FROM INVESTING ACTIVITIES</u></b> |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Replacement of equipment                          | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| Proceeds** from sale of equipment                 | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| <b>Net cash flow from investing activities</b>    | <b>0</b>         | <b>0</b>         | <b>0</b>         | <b>0</b>         | <b>0</b>         | <b>0</b>         | <b>0</b>         | <b>0</b>         | <b>0</b>         | <b>0</b>         |
| <b><u>CASH FLOW FROM FINANCING ACTIVITIES</u></b> |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Proceeds from capital contributed                 | 3,614,250        | 0                | 0                | 0                | 0                |                  |                  |                  |                  | 0                |
| Proceeds from loan                                | 1,204,750        | 0                | 0                | 0                | 0                |                  |                  |                  |                  | 0                |
| Payment of loan                                   | (83,163)         | (89,816)         | (97,002)         | (104,762)        | (113,143)        | (122,194)        | (131,970)        | (142,527)        | (153,929)        | (166,244)        |
| <b>Net cash flow from financing activities</b>    | <b>4,735,837</b> | <b>(89,816)</b>  | <b>(97,002)</b>  | <b>(104,762)</b> | <b>(113,143)</b> | <b>(122,194)</b> | <b>(131,970)</b> | <b>(142,527)</b> | <b>(153,929)</b> | <b>(166,244)</b> |
| <b><u>NET INCREASE/DECREASE IN CASH</u></b>       | <b>5,520,368</b> | <b>766,076</b>   | <b>830,332</b>   | <b>898,309</b>   | <b>1,009,097</b> | <b>1,086,537</b> | <b>1,198,906</b> | <b>1,286,083</b> | <b>1,419,903</b> | <b>1,507,236</b> |
| Cash at the beginning of the period               | 678,397          | 741,963          | 805,662          | 873,209          | 979,030          | 1,056,192        | 1,173,395        | 1,261,315        | 1,391,156        | 1,491,112        |
| Cash at the end of the period                     | <b>6,198,765</b> | <b>1,508,039</b> | <b>1,635,993</b> | <b>1,771,518</b> | <b>1,988,127</b> | <b>2,142,729</b> | <b>2,372,301</b> | <b>2,547,398</b> | <b>2,811,059</b> | <b>2,998,348</b> |

## ANNEX III BALANCE SHEET

| (all numbers in US\$)                 | Year 1           | Year 2           | Year 3           | Year 4           | Year 5           | Year 6           | Year 7           | Year 8           | Year 9           | Year 10          |
|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>ASSET</b>                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Current asset                         | 678,397          | 741,963          | 805,662          | 873,209          | 979,030          | 1,056,192        | 1,173,395        | 1,261,315        | 1,391,156        | 1,491,112        |
| Fixed asset                           | 4,119,000        | 4,012,866        | 3,898,936        | 3,777,264        | 3,647,403        | 3,504,193        | 3,351,653        | 3,184,397        | 3,006,544        | 2,812,466        |
| Liquidity                             | 1,212,958        | 1,302,058        | 1,390,533        | 1,484,134        | 1,636,682        | 1,743,312        | 1,911,497        | 2,032,612        | 2,218,036        | 2,355,243        |
| <b>TOTAL ASSET</b>                    | <b>6,010,355</b> | <b>6,056,887</b> | <b>6,095,131</b> | <b>6,134,607</b> | <b>6,263,115</b> | <b>6,303,697</b> | <b>6,436,545</b> | <b>6,478,324</b> | <b>6,615,736</b> | <b>6,658,821</b> |
| <b>NET ASSET MINUS DEPRECIATION</b>   | <b>5,904,222</b> | <b>5,942,957</b> | <b>5,973,459</b> | <b>6,004,745</b> | <b>6,119,906</b> | <b>6,151,157</b> | <b>6,269,289</b> | <b>6,300,470</b> | <b>6,421,657</b> | <b>6,452,737</b> |
| <b>EQUITY &amp; LIABILITIES</b>       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Equity                                | 4,819,000        | 4,578,050        | 4,349,148        | 4,131,690        | 3,925,106        | 3,728,850        | 3,542,408        | 3,365,287        | 3,197,023        | 3,037,172        |
| Reserves                              | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                | 0                |
| <b>Total Own Equity</b>               | <b>4,819,000</b> | <b>4,578,050</b> | <b>4,349,148</b> | <b>4,131,690</b> | <b>3,925,106</b> | <b>3,728,850</b> | <b>3,542,408</b> | <b>3,365,287</b> | <b>3,197,023</b> | <b>3,037,172</b> |
| Provisions                            | 467,497          | 714,995          | 942,438          | 1,157,369        | 1,424,005        | 1,612,992        | 1,856,810        | 2,021,358        | 2,243,826        | 2,385,190        |
| Long term loan                        | 179,543          | 179,543          | 179,543          | 179,543          | 179,543          | 179,543          | 179,543          | 179,543          | 179,543          | 179,543          |
| Short term Liabilities                | 438,181          | 470,368          | 502,330          | 536,143          | 591,251          | 629,772          | 690,528          | 734,281          | 801,265          | 850,832          |
| <b>Total Equity &amp; Liabilities</b> | <b>5,904,222</b> | <b>5,942,957</b> | <b>5,973,459</b> | <b>6,004,745</b> | <b>6,119,906</b> | <b>6,151,157</b> | <b>6,269,289</b> | <b>6,300,470</b> | <b>6,421,657</b> | <b>6,452,737</b> |
| NET FA/CL                             | 22.94            | 22.35            | 21.72            | 21.04            | 20.31            | 19.52            | 18.67            | 17.74            | 16.75            | 15.66            |
| CL/CA                                 | 0.65             | 0.63             | 0.62             | 0.61             | 0.60             | 0.60             | 0.59             | 0.58             | 0.58             | 0.57             |
| <b>DEBIT/CAPITAL RATIOS</b>           | <b>0.18</b>      | <b>0.23</b>      | <b>0.27</b>      | <b>0.31</b>      | <b>0.36</b>      | <b>0.39</b>      | <b>0.43</b>      | <b>0.47</b>      | <b>0.50</b>      | <b>0.53</b>      |
| <b>ROI</b>                            | <b>14.1</b>      | <b>16.2</b>      | <b>18.5</b>      | <b>21.1</b>      | <b>24.9</b>      | <b>28.3</b>      | <b>33.1</b>      | <b>37.5</b>      | <b>43.5</b>      | <b>49.1</b>      |
| <b>BREAK EVEN POINT</b>               | <b>3.40</b>      | <b>3.08</b>      | <b>2.80</b>      | <b>2.55</b>      | <b>2.23</b>      | <b>2.01</b>      | <b>1.75</b>      | <b>1.57</b>      | <b>1.36</b>      | <b>1.19</b>      |
| <b>BREAK EVEN RATIO</b>               | <b>1.68</b>      | <b>1.62</b>      | <b>1.58</b>      | <b>1.54</b>      | <b>1.43</b>      | <b>1.39</b>      | <b>1.30</b>      | <b>1.27</b>      | <b>1.20</b>      | <b>1.17</b>      |
| <b>EQUITY/TOTAL LIABILITIES</b>       | <b>82</b>        | <b>77</b>        | <b>73</b>        | <b>69</b>        | <b>64</b>        | <b>61</b>        | <b>57</b>        | <b>53</b>        | <b>50</b>        | <b>47</b>        |

## ANNEX IV LOAN PAYMENT SCHEDULE

| Loan Information and Payment Schedule |                    |  |                             |  |            |
|---------------------------------------|--------------------|--|-----------------------------|--|------------|
| Loan Data                             | All number in US\$ |  | Loan Summary                |  |            |
| Original Principal                    | 1,204,750.00       |  | Scheduled Payments          |  | 179,543.28 |
| Loan Term (Years)                     | 10.00              |  | Scheduled number of payment |  | 10.00      |
| Annual Interest Rate                  | 8%                 |  | Actual number of payment    |  | 10.00      |
| Payments per Year                     | 1.00               |  | Total Early Payment         |  | -          |
| Payment                               | 179,543.28         |  | Total Interest              |  | 590,682.77 |

| Year  | Payment    | Interest   | Cumulative Interest | Principal  | Balance      |
|-------|------------|------------|---------------------|------------|--------------|
| -     |            |            |                     |            | 1,204,750.00 |
| 1.00  | 179,543.28 | 96,380.00  | 96,380.00           | 83,163.28  | 1,121,586.72 |
| 2.00  | 179,543.28 | 89,726.94  | 186,106.94          | 89,816.34  | 1,031,770.38 |
| 3.00  | 179,543.28 | 82,541.63  | 268,648.57          | 97,001.65  | 934,768.74   |
| 4.00  | 179,543.28 | 74,781.50  | 343,430.07          | 104,761.78 | 830,006.96   |
| 5.00  | 179,543.28 | 66,400.56  | 409,830.62          | 113,142.72 | 716,864.24   |
| 6.00  | 179,543.28 | 57,349.14  | 467,179.76          | 122,194.14 | 594,670.11   |
| 7.00  | 179,543.28 | 47,573.61  | 514,753.37          | 131,969.67 | 462,700.44   |
| 8.00  | 179,543.28 | 37,016.03  | 551,769.41          | 142,527.24 | 320,173.20   |
| 9.00  | 179,543.28 | 25,613.86  | 577,383.26          | 153,929.42 | 166,243.77   |
| 10.00 | 179,543.28 | 13,299.50  | 590,682.77          | 166,243.77 | 0.00         |
|       |            | 590,682.77 |                     |            |              |

## ANNEX V INTERNAL RATE OF RETURN

(all numbers in US\$)

|         |                              |               |
|---------|------------------------------|---------------|
|         | Initial Investment           | -4,819,000    |
| Year 1  | Additional Annual Net Profit | 678,397       |
| Year 2  | Additional Annual Net Profit | 741,963       |
| Year 3  | Additional Annual Net Profit | 805,662       |
| Year 4  | Additional Annual Net Profit | 873,209       |
| Year 5  | Additional Annual Net Profit | 979,030       |
| Year 6  | Additional Annual Net Profit | 1,056,192     |
| Year 7  | Additional Annual Net Profit | 1,173,395     |
| Year 8  | Additional Annual Net Profit | 1,261,315     |
| Year 9  | Additional Annual Net Profit | 1,391,156     |
| Year 10 | Additional Annual Net Profit | 1,491,112     |
|         | <b>IRR (in 10 years)</b>     | <b>14.63%</b> |

The IRR above indicates that the expected return on the TZS 4,819,000 initial investment after 10 years is 14.64%.

## ANNEX VI PAY BACK PERIOD

### Payback Period Analysis

|                    | Year  | Beginning Balance | Net Cash Flows | Ending Balance |
|--------------------|-------|-------------------|----------------|----------------|
| Cost of investment | 0.00  | 4,819,000.00      | 0.00           | 4,819,000.00   |
|                    | 1.00  | 4,819,000.00      | 678,397.09     | 4,140,602.91   |
|                    | 2.00  | 4,140,602.91      | 741,962.55     | 3,398,640.36   |
|                    | 3.00  | 3,398,640.36      | 805,661.51     | 2,592,978.85   |
|                    | 4.00  | 2,592,978.85      | 873,208.85     | 1,719,770.00   |
|                    | 5.00  | 1,719,770.00      | 979,030.23     | 740,739.78     |
|                    | 6.00  | 740,739.78        | 1,056,191.55   | 315,451.77     |
|                    | 7.00  | 315,451.77        | 1,173,395.16   | 1,488,846.93   |
|                    | 8.00  | 1,488,846.93      | 1,261,314.68   | 2,750,161.61   |
|                    | 9.00  | 2,750,161.61      | 1,391,156.33   | 4,141,317.94   |
|                    | 10.00 | 4,141,317.94      | 1,491,112.11   | 5,632,430.05   |

**Payback Period = 6.00 Years**

## **8.0. CONCLUDING REMARKS AND WAY FORWARD**

### **8.1. Evidence of project viability based on financial model and policy framework support**

On the basis of all the analysis done on this Business Plan on all aspects of assessment on both SWOC Analysis, market analysis, risk analysis and the financial analysis, the proposed investment options in the project as prescribed on this business plan have shown that the project is commercially viable. Nonetheless, Matongo Gold Mines Limited through professional consultative manner, will continue to find ways of implementing cost effective options given time and financial resources that will be made available. Financial analysis results show that when the construction of plant facility is financed using a combination of equity debt ratio (25:75), it gives an IRR of about 14.63%. The computed IRR is well above Dollar market of the annual loan interest rate of (8.00%) which is technically interpreted that the project is financially viable. The payback period for the project is estimated at 7 years, which is within the range for this type of investment. Sensitivity analysis results also favor the project. Financial analysis for the project has shown feasible returns. Based on the investment scope and the assumptions taken in this Business Plan, the project will not face any difficulties during establishment, according to the projected cash flow be in a position to accomplish repayment of the loan and start generating profit.

### **8.2. Policy Framework Support**

The development of the Matongo Gold Mines Limited is designed to take advantages of the current Tanzanian market-oriented reforms. The Project will be developed and established to accelerate the industrialization process. The vision 2025 emphasizes the importance of the allocation of public funds for strategic investments and private sector financing for development investments.

The 15 years Perspective Plan (2020-2025); Prioritize private investment in the context of Public Private Partnership. The First Five Years Development Plan (2021-2025) recognizes the fundamental role of the private sector in enabling the government to allocate its fund to strategic projects to facilitate a higher level of development. MKUKUTA III (2020-2025) identifies Public Private Partnership as a means of increasing the level of stakeholder participation and of easing the financial burden on the government. It should be noted that existing public resources are clearly insufficient to meet Tanzanian's huge development needs. The increased use of private enterprises participation in development projects can help alleviate the financing gap. This approach is now applied by Matongo Gold Mines Limited to ensure development of one among the ultra-modern plant in Mara Region. Private sector and investment have been recognized as the most significant potential source of additional funding required to facilitate development projects.

### **8.3. Conclusive Remarks and Way Forward**

The development of this project will be funded by private finances. The company acting through its various shareholders and structures will provide the initial risk capital amounting to 4,819,000US\$ and the amount of US\$ 1,204,750 will be raised through borrowing from investment banks either within or outside the country. The company will fund the development of the project minor rehabilitations of factory building, business offices, bulk storage facilities and purchasing machines as stated on this business plan. Before the Company engages into the development of this project as a private enterprise, it needs to accomplish the pre development activities to make way for the development of the designated project. The company has to accomplish the following;

**a) Apply for TIC certificate**

The company by using this Business Plan and other required supporting documents should apply for the TIC Certificate at Tanzania investment centre or Mwanza zonal Office. With this certificate, the company will be able to access tax reliefs which to a large extent will help to in reducing project costs, particularly in the purchasing of machineries and minor building of area of proposed industrial area.

**b) Conduct Environmental Impact Assessment.**

The company has to engage a consultant to conduct EIA in order to ensure that environmental and possibly other sustainability aspects are considered effectively in policy, plan and project development. The EIA Directive aims at introducing systematic assessment of the environmental effects of strategic land use related plans and programs. It typically applies to regional and local, development, waste and transport plans, within the country. EIA ensures that plans and programs take into consideration the environmental effects they cause.

**c) Minor rehabilitation to suit project Industrial requirement**

The company should engage a firm to make minor rehabilitation of existing structure that will suit project manufacturing requirements. The structure should include all vital service facilities described in this business plan. When possible, the process of design of the facility should be consultative insomuch that it should allow and incorporate ideas from experienced professionals from the industry.

**d) Mobilizing Funds**

As previously discussed on the Financial Analysis of this business plan, financing mechanism for plant should be scrutinized well before commencing the project implementation. There may be several options of financing the project development but the company will find the best option. The investment team should do consultation with relevant financial institutions (Banks and non-bank Financial Institutions), both within and outside the country. This exercise should be more effective if the team works closely with central government agencies, particularly TIC and the Ministry of Investment and facilitation.