assure consulting

CHROME MINING LIMITED

BUSINESS PLAN FOR:

The setup of a gemstone mining operation in Mkange, Bagamoyo, Tanzania.

THE DIRECTORS STATEMENT

This business plan is strictly the proprietary property of Chrome Mining Limited and is absolutely not to be released or transmitted in any form without explicit, written approval from the authorized representatives of Chrome Mining Limited.

This information presented in this document has been reviewed, approved and authorized by the Board of Directors of Chrome Mining Limited to be used in a manner deemed fit by the Company.

This document has been prepared to project the expected financial results and affairs of Chrome Mining Limited.

APPROVED BY:

Name AHMED ABDULMAGIED AHMED QASIM SEDDIQI

Date 25th March 2024

Position DIRECTOR

Signature 

LIST OF ABBREVIATIONS

Term	Definition of the Term
CAPM	**Capital Asset Pricing Model**
DPB	**Discounted Payback Period**
DSE	**Dar es Salaam Stock Exchange**
GDP	**Gross Domestic Product**
HE	**Her Excellency (the President)**
Hon	**Honourable - - -**
MEMARTS	**Memorandum and Articles of Association**
IRR	**Internal Rate of Return**
NE	**North East (Direction)**
NPV	**Net Present Value**
NW	**North West (Direction)**
PI	**Profitability Index**
TMIF	**Tanzania Mining and Investment Forum**
WACC	**Weighted Average Cost of Capital**

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1 EXECUTIVE SUMMARY

1.1 The Project's Background

This business plan examines the opportunity for Chrome Mining Limited to set up a gemstone processing operation in Mkange, Bagamoyo. In particular, the gemstone operation site's geological study found promising evidence of yellow and green tourmaline stones. This discovery has laid the foundation for a lucrative mining and gemstone processing venture in the region.

The project business plan is a description of the proposed project idea that will be implemented during its inception. The business plan outlines the initial plan laid out by the shareholders of Chrome Mining Limited in undertaking the project, setting a business vision and gathering the initial cost estimates to complete the project. These estimates and other critical financial information are provided in the appendix attached to this report as follows:

- Financial Projections for the Project; and
- Breakdowns of cost structures

1.2 The Project's Promoters

1.2.1 About Chrome Mining Limited

The project is promoted by Chrome Mining Limited; a private company owned and registered in Tanzania, East Africa. The company was registered under the Companies Act 12 of 2002 in Dar es Salaam. The main objective of the company according to their MEMARTS are the following:

1. To mine, quarry, search for, obtain, win, work, dress, shape, mould, hew, polish, crush, refine, smelt, screen, prepare for market, buy, sell, deal, broker in or use all minerals, ore, stones, gas, fuels, fuel substances, oil, petroleum and all other natural resources and their derivatives of all kinds. The Company is authorised to sell and distribute the same as retailers, wholesalers, agents, exporters, importers, joint ventures, transporters and carriers. The Company is also authorised and permitted to employ and pay mining exploration and development experts, agents and other persons, partnerships, companies or corporations and to organise equipment, dispatch expeditions for prospecting, exploring, reporting, surveying, working and developing all such products, lands, farms, districts, territories, and properties whether the same are the property of the Company or over which the Company has rights or otherwise.
2. To explore, survey, prospect, search for, develop, exploit, work. Refine and deal in minerals, ores, stones, gas, fuels, and fuel substances, oil, petroleum, and other natural resources of all kinds. The Company is authorised to drill for, extract, gain, pump, analyse, refine, treat, store, transport, buy, sell and engage in other transactions involving these resources or any products or substances produced or derived from them.
3. To purchase, take on lease or in exchange or acquire by permit, reservation, license, concession, grant, or otherwise any mines, deposits, mineral rights, exploration rights, development rights, franchises, easements, and privileges which the Company may from time to time think desirable for business.

4. To act as miners, quarry masters, smelters, producers, purchasers, sellers, and marketers of all substances, products and derivatives of all kinds. The Company will also act as refiners, distillers, transporters, owners and operators of mines, exploratory interests, gas and oil production units and supply bases. Generally, the Company will engage in any business that may be conveniently carried out in connection with the aforementioned activities.

1.2.2 The Shareholding Structure

The authorized share capital of the company stands at **Tanzanian Shillings One Billion only (TZS 1,000,000,000 only)** comprising of 100 ordinary shares valued at par with **Tanzanian Shillings Ten-million only (TZS 10,000,000 only)**. The Company shall have the power to divide the original or any increased share capital into several capital classes to attach thereto any preferential, deferred, qualified or any other special rights, privileges, restrictions or conditions. As at the reporting period of this business plan, the following are the shareholders of the Company:

Shareholder Name	Nationality	Shareholding Percentage	Quantity of Shares
Ahmed A. Qasim Seddiqi	Emirati	75%	75.00
Jumbe Suphiani Nungu	Tanzanian	25%	25.00
Total Shareholding		**100%**	**100.00**

1.3 The Project's Concept

The promoters of the project focused on increasing revenues and broaden tourist demographics to allow an inclusive property that caters for all-aged group guests.

The project revolves around the activities of extracting tourmaline, processing and marketing of the stones from the rich deposits found in Mkange, Bagamoyo. The Company leverages sustainable gemstone processing techniques and will also aim to establish a robust supply chain that ensures high quality processed gemstones reach the market.

1.3.1 The Project's Objectives

Chrome Mining Limited's essence is to expand gemstone mining in a sustainable fashion and create high quality gemstone products. The main project objectives are outlined below as follows:

1. **Exploration and Extraction:** Conducting comprehensive geological surveys and deploy sustainable mining methods to locate and extract gemstones in the licensed area. Currently, the Company will extract yellow and green tourmaline stones for processing and selling.
2. **Processing and Refinement:** Chrome Mining Limited will invest in a modern setup to refine raw gemstones into high-quality polished products which adhere to quality standards and industry best practices.
3. **Market Penetration:** Identification of distribution channels and penetration into the gemstone market, which will showcase the unique beauty and quality of the stones mined at Chrome Mining Limited's sites.
4. **Community Engagement:** Fostering positive relationships with local communities by prioritising sustainable development initiatives, job creation and transfer of skills.
5. **Environmental Stewardships:** Implement robust environmental management practices to minimise ecological footprints and promote biodiversity conservations in the mining areas.

1.3.2 Current Activities performed on-site

The activities that have been undertaken in the licensed area QDS 149/3 located in Mkange so far are the geochemical sampling as well as rock sampling. A hand-held GPS machine was used to locate the exact coordinates of the plot for field observation. The table below shows coordinates of the extracted samples in UTM and the activities conducted:

Sample ID	Coordinates (Easting's MN)	UTM (Northing's MN)	Activity Conducted
001	0456273	7337253	Soil Sampling
002	0456278	7337249	Rock Sampling Outcrop
003	0456064	9336761	Soil Sampling
004	0456264	9336957	Soil Sampling
005	0456322	9336887	Rock Sampling Outcrop
006	0456303	9337091	Soil Sampling Pit Bottom
007			Soil Sampling Pit Bottom Yellow
008	0456394	9337532	Soil Sampling
009	0456354	9337328	Soil Sampling

1.4 The Project's Value Proposition

This project attracts a range of benefits for various stakeholders through a multifaceted approach that encompasses both economic as well as social considerations. After conducting an analysis of the project's footprint and the effects similar projects have, the identified project benefits that Chrome Mining Limited will contribute towards the project are grouped by stakeholder groups as follows:

Investors The investors in this project expect financial returns on their investment driven by a demand of fashionable finishing of green and yellow tourmaline stones. Effective management practices that optimise efficiency, minimise costs, and maximise profitability contribute towards investor confidence and long-term financial and operational viability.

Government The project will contribute to the economy through various means not limited to taxes and fees. Additionally, this mining operation will promote foreign exchange earnings in the gemstone supply chain. The project will also adhere to sustainable practices, environmental regulations and responsible and ethical mining principles which align with the government's priorities for conservation and sustainable development.

Community The project will generate employment opportunities for the local community, enhance infrastructure development and contribute towards the socioeconomic upliftment of communities in Mkange. The local employees will build capacity by working with skilled expatriate professionals in the mining field. The transfer of skills from professionals will improve employability as well as increase the application of industry best practices in the gemstone mining operations. All of this is expected to strongly improve the living conditions and enhance financial independence to the communities

in the region. Details of the local employment proportions can be observed in Section 7.3.1 of this report.

Environment The project is expected to prioritise environmental conservation and reduce as much as possible any unnecessary environmental footprints. Implementing as much as possible eco-friendly practices such as waste management, energy efficient measures, water conservation and biodiversity will not only mitigate environmental impacts but also continue to maintain environmental sustainability for Mkange's ecosystem for future generations.

Technology The use of technology in mining operations will enhance the efficiency of extraction in the mining sites. The local employees who will be operating this machinery will also enjoy the benefits of building capacity in using heavy machinery in the extraction of gemstones in the site. Furthermore, the outcome of the use of the machinery will improve the investor's return on investment and will allow the gemstone operations to facilitate the payment of government taxes much faster.

In summary, the gemstone mining project in Mkange represents a harmonious blend of economic prosperity, social development and environmental stewardship. By adhering to the Company's core values, the promoters are determined to set new benchmarks in the gemstone mining industry whilst making a positive impact on the lives of the stakeholders involved.

1.5 Project's Mission, Vision, Objectives and Keys to Success

1.5.1 Chrome Mining Limited's Mission Statement

At Chrome Mining Limited, our mission is to ethically and sustainably extract, process and market gemstones. Through our innovative practices, community engagement and environmental stewardship, we aim to create lasting value for our stakeholders and contribute to the economic development and conservation of natural resources in Tanzania.

1.5.2 Chrome Mining Limited's Vision Statement

Within the next five years, we envision becoming a respected regional leader in the gemstone mining industry, well known for our commitment to excellence, sustainability and social responsibility. We aspire to expand our operations, diversify our product portfolio, and establish a strong foothold in major markets across the globe. By fostering inclusive growth, empowering local communities and preserving the environment, we strive to set new standards of excellence whilst creating enduring value for the generations to come.

1.6 Summary of the Project's Financial Returns

1.6.1 Investment Analysis

The total amount of fixed investment that is required to commence on the mining operation of this project has been valued to be USD $1,020,000. This amount comprises of the investment in pre-

operational costs, civil construction, installation of necessary equipment and furnishing of gemstone processing facility in Mkange.

1.6.2 Project Projections

Chrome Mining Limited's proposed project yields a Net Present Value (NPV) of USD $ 7,426,216.48. This financial metric determines that the project has the potential of adequately compensating its initial investment within the projected period of the projections. The project's Internal Rate of Return (IRR) after tax is computed to be 52.68 percent at Year 2 which is above the project's Cost of Capital of 16.2 percent. With the above investment metrics, it can be reasonably concluded that the project is sustainable financially. The project's profitability is attributed to the nature of the project in terms of the quality of the processed gemstones and the diversification of the gemstone products.

The economic benefits for this project will contribute to are; (i) government revenue (taxes); (ii) generation of employment opportunities; (iii) professional manpower development; and, (iv) transfer of knowledge to Tanzanian employees.

1.6.3 Summary of the Projections

Measure of Financial Metric	Value	Evaluation
Net Present Value (USD)	$7,426,216.48	The project has a positive NPV and indicates a favourable and healthy investment opportunity.
Internal Rate of Return (IRR)	52.68%	The IRR is greater than the cost of capital used which indicates a healthy investment.
Profitability Index	15.38	The project is derived as a financially viable opportunity to invest as the profitability index is calculated as above one (1.00).
Discounted Payback Period (DPB)	2.72 years	The payback period taking into account time value of money shows that the investment can be recovered earlier than the projected debt tenure, which is considered to be safe and a risk managed project.

1.6.4 Summary of the Expected Processing Plans

Department Section	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
The target processing quantities (kg)	**0.00**	**500.00**	**500.00**	**525.00**	**556.00**	**592.00**
Discounted Rate	**20%**	**20%**	**20%**	**20%**	**20%**	**20%**
Adjusted Production rates (kg)	**0.00**	**400.00**	**400.00**	**420.00**	**445.00**	**475.00**

2 MACROECONOMIC ANALYSIS

2.1 Introduction

This section of the business plan provides extensive information on the project's economy, characteristics, market and estimates of the mining industry.

2.2 The Project's Economy

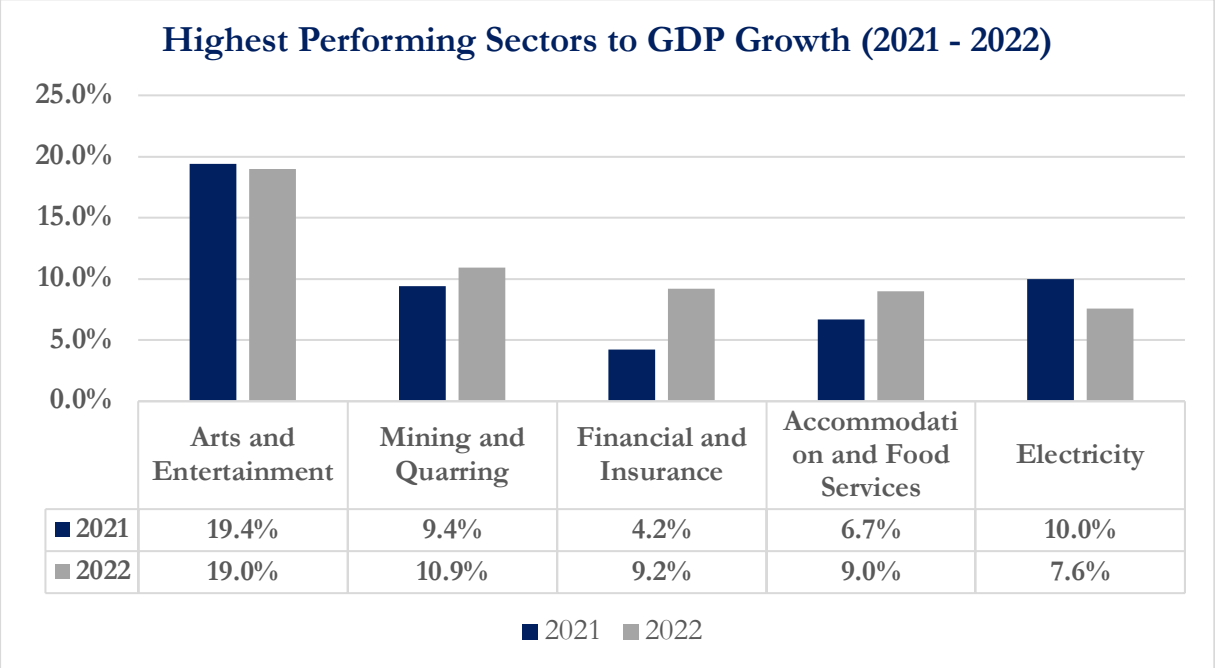
2.2.1 The Project's Location

Mkange is an administrative ward in Chalinze District of Pwani. The ward covers an area of 939.50 km² and has an average elevation of 250m. The ward is bordered by Pangani District to the NE and Handeni District to the NW. Mkange is part of the Tanzanian craton extending from the Northern part of Mozambique to the central part of Kenya. The strip contains numerous gemstone deposits including ruby, sapphire, emerald and tourmaline as well as different gemstone varieties of garnet beryl Alexendrite and Tanzanite.

2.2.2 Trends in GDP Growth Rates

In the year 2022, Tanzania's real GDP grew at a rate of 4.7 percent valuing at TZS 141,872,730 million (2021: TZS 135,478,189 million). The growth was recorded as driven by the economic measures undertaken by the government in containing economic impacts resulting from the war in Ukraine; strategic investments in the energy sector, water, health, education, infrastructure as well as increased activities in the mining and tourism sector. The mining and quarrying sector experienced an increased growth at 10.4 percent in 2022 (2021: 9.4 percent and 2020/21: 6.7 percent). The increase in activities within the mineral sector has led the sector to become the economy's leading foreign exchange earner (Ministry of Minerals , 2023).

In the years 2021 and 2022, the economic activities that recorded the highest growth are presented in the following graph below:



	Arts and Entertainment	Mining and Quarring	Financial and Insurance	Accommodation and Food Services	Electricity
2021	19.4%	9.4%	4.2%	6.7%	10.0%
2022	19.0%	10.9%	9.2%	9.0%	7.6%

3 GEMSTONE PROCESSING IN TANZANIA

3.1 Introduction

Over the last decade, East Africa has been experiencing a rapid growth in the minerals sector. Under the leadership of HE Dr. Samia Suluhu Hassan, the President of the United Republic of Tanzania, the government has been focusing on ensuring that the mining sector contributes to at least 10 percent of the GDP by the year 2025. The perquisite to materialising this ambition is to engage with international communities to mobilise capital and investment in the mining sector. Chrome Mining Limited is one of the contributors towards materialising HE Dr. Samia Suluhu Hassan's focus.

The government's focus on encouraging foreign investments in the mining sector can be clearly seen through the efforts in organising the TMIF which took place in Dar es Salaam on the 25th and 26th October, 2023 at the JNICC and led by Hon. Anthony Mavunde (MP), the Minister of Minerals of the United Republic of Tanzania. The event hosted over 2,000 attendees and over 100 delegates, ministerial, governmental and industry speakers (TMIF, 2023).

There are several available opportunities in the gemstone processing industry in Tanzania; not limited to the following: Processing of precious metals and gemstones; Establishing a caustic soda refinery plant in Engaruka; Production of iron ore and steel in Liganga; Processing of nickel in Kabanga; Gold processing in Geita and Mwanza; Tanzanite Processing in Manyara and the Investment in minerals smelters (EPZA, n.d).

3.2 Gemstone Processing in Tanzania

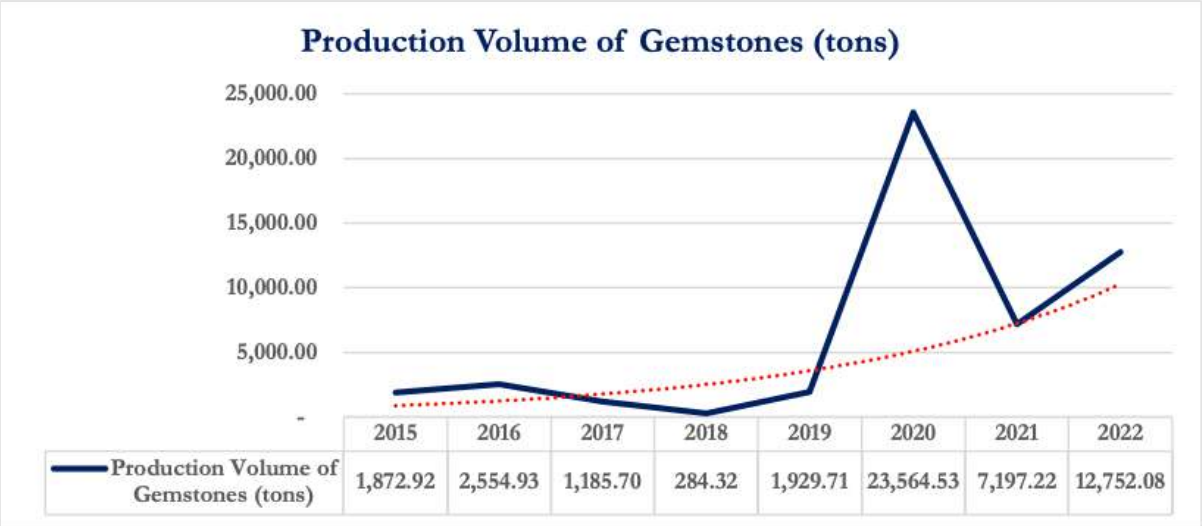
Minerals export accounted for USD 1.37bn of the total value of Tanzania's export in 2015 (i.e., 24 percent) with gold representing more than 90 percent of minerals export. Tanzania is endowed with a variety of industrial minerals and precious metals as well as gemstones. The minerals include iron ore, soda ash, coal, clay soil, uranium, and gold. Tanzania has a variety of gemstones, including aquamarine, garnet, ruby, sapphire, tourmaline, and tanzanite.

However, most of these resources are being exported in their raw form without being processed; thus, denying Tanzania the ability to benefit from the value-added processing. Because of the lack of gemstone processing facilities in Tanzania, information pertaining to the gemstone processing is scarce, but holds an abundance of opportunities in the market.

3.2.1 Market Performance of Gemstones

A total of 12,752 tons of raw gemstones (excluding Tanzanite and Diamonds) were mined in the year 2022 (2021: 7,197 tons). This represents an increase of 77.2 percent in the gemstone mining industry. This increase was experienced because of the global improvement in gemstones business which also attracted the exports of large quantities of quartz, moonstones and feldspar.

The following graph details a comprehensive trend analysis that has shaped the gemstone production in Tanzania. As depicted from the graph, the period has been characterised by fluctuating production volumes spurred by demand volatilities, market dynamics and exploration activities:



	2015	2016	2017	2018	2019	2020	2021	2022
Production Volume of Gemstones (tons)	1,872.92	2,554.93	1,185.70	284.32	1,929.71	23,564.53	7,197.22	12,752.08

4 ABOUT TOURMALINE STONES

4.1 What are Tourmaline Stones

Tourmaline is a unique colourful gemstone to be mined and then processed in the respective area of Mkange, Bagamoyo. These tones are borosilicate with a very complex chemical structure. The colours are caused, amongst other things, by tiny amounts of foreign matter and trace elements. Because of its complex structure, it exists in almost an endless number of varieties and colours depending on where they are extracted. In most cases, these gemstones come in green, red, blue, yellow, colourless and black. However, in the mining site, there has been evidence of green and yellow tourmaline gemstones.

Often, two or more colours appear in a single tourmaline crystal. There are certain types of tourmaline gemstones which appear to change colour. The green tourmaline is regarded as the classical gemstone colour and is usually the first colour a gemstone merchant will think of.

Green Tourmaline gemstones also vary in colour. Some gemstones are lighter than others and others are dark such that they must be reflected against the light in order to expose the greenish colour of the gemstone. There are certain green shades of the gemstone in fine leek hues, whilst others portray themselves as yellowish-green, olive green and brownish-green nuances.

4.2 The Characteristics of Tourmaline Gemstones

4.2.1 Colours of the Gemstone

4.2.1.1 Red/Pink Colour

One of the tourmaline's most sought-after and generally available colours is the pink/red variety which is also known as the rubellite. This gemstone is a member of the elbaite and is often mistaken for the ruby gemstone. These forms of gemstones are usually mined in Afghanistan, Brazil, Madagascar, Myanmar, Nigeria, Russia and the United States of America (International Gemstone Society, n.d).

As an elbaite, it is a desirable member of the tourmaline group because of the variety and depth of the colours and the quality of the crystals. Originally, it was discovered in the Island of Elba, Italy in 1913.

In addition to the gemstone being mistaken as a ruby gemstone, the tourmaline's hue and depth of the colour can approach the range of a pink sapphire. The picture in this section shows a red cushion-shaped rubellite and a pink emerald cut pink tourmalines are superb examples of how closely alike they look to the rubies and sapphires.

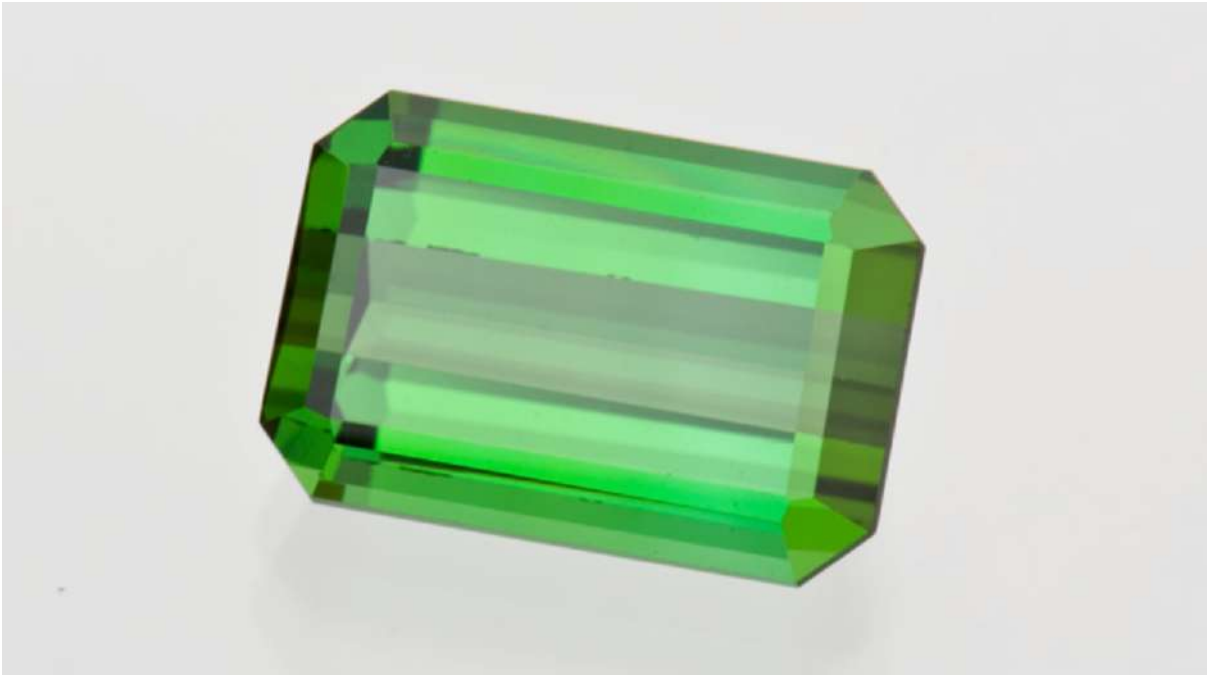
4.2.1.2 Green Colour

Green tourmaline's pastel hues provide the market with pleasing alternatives to the deep rich hues often mistaken as emeralds and the softer green of peridot. A high-quality green tourmaline is transparent, brilliant and clean and presents attractive bluish green hues. Most green tourmaline gemstones are strongly pleochroic. These are stones that show attractive colours in both directions – such as bright green on one side and blue on another. These are considered as most valuable gemstones.

Chrome tourmalines offer hues that are more saturated than most green tourmalines. This colour of the gemstone can be a lower-priced alternative to the tsavorite or the emerald gemstone. The tourmaline gemstones are far less expensive even if compared to an equivalent size and quality of a tsavorite/emerald.

Dark-toned stones are more common in the market place, however, due to its availability, they are not an attractive gemstone. Some tourmalines absorb light so intensely that they appear almost black from certain directions. Cutters typically fashion these stones with the table parallel to the length of the crystal which may reflect a brownish or yellowish colour through the crown. Dealers usually describe this colour as "oily" or "olive" green.

This tourmaline gemstone is an 11.47-carat cushion-shape cut from Landanai (Simanjiro District) in Manyara Region, Tanzania. It is a typical example of a chrome-coloured tourmaline. It's high clarity, medium-toned and a strong green hue which makes such gemstone colours a desirable item in the gemstone marketplace (International Gemstone Society, n.d)**.**



This tourmaline gemstone is an 8.76-carat emerald cut and is strongly saturated. Its yellowish tint also makes this colour a desirable product in the gemstone marketplace (International Gemstone Society, n.d)**.**

This green medium-light tone tourmaline gemstone has a bluish-green tint to the stone and accounts for 5.43-carats. The gemstone is cut into a fine emerald cut from Tanzania (International Gemstone Society, n.d)**.**

4.2.1.3 Blue Colour

Blue tourmaline gemstones can be found in various tones and hues. These hues can be modified by a green tint so that the owner can have a blue gemstone with a modified tint of green. Some tourmalines have a natural green and bluish tint to it. Just like the green tourmaline gemstones, the blue coloured tourmalines can also be strong and vivid as well as less saturated and greyish.

This 1.80-carat rectangular step cut tourmaline was mined from Russia and glares a slightly greenish blue hue with moderate saturation. This is a noteworthy combination of a blue tourmaline (International Gemstone Society, n.d)**.**

This 9.91-carat Afghan tourmaline hovering between green and blue hues. Its high clarity and medium tone give a pleasant appearance (International Gemstone Society, n.d)**.**

4.2.1.4 Paraiba Colour

The Paraiba tourmalines have a striking neon blue and green colour which has created a massive demand all over the world. The gemstone's unique, vivid colouring instantly sets apart itself from the other groups of tourmalines. Initial worldwide reception of the gemstone was wild and exclusive, especially in countries like Japan where the demand for these fine-coloured gemstones were insatiable.

The prices for these gemstones in top quality and sizes between 3.0 and 5.0 carats rocketed a record-breaking rate of over USD $10,000 per carat. No colour of tourmaline has been able to achieve such heights in value; and to date, due to its rareness, the Paraiba tourmaline continues to soar in high prices.

The Paraiba tourmaline gemstone forms in pegmatite but its crystals form under very unusual conditions, with large amounts of trace elements such as manganese and copper which contributes towards its hue. Although copper colours some of the gemstones, the copper is not a colouring agent for the tourmaline gemstones.

The Paraiba tourmalines appear in a range of colours; notably greenish blue, bluish green, green, blue and violet hues. Although buyers covet all of these colours, blue and violet have the most appeal. Dealers in the gemstone industry use a number of names to capture the extraordinary quality of the Paraiba tourmaline's colours. Besides the neon, they use terms like "electric", "turquoise", "sapphire" or "tanzanite blue" and "mint green" to describe the wonderful colours of the stone.

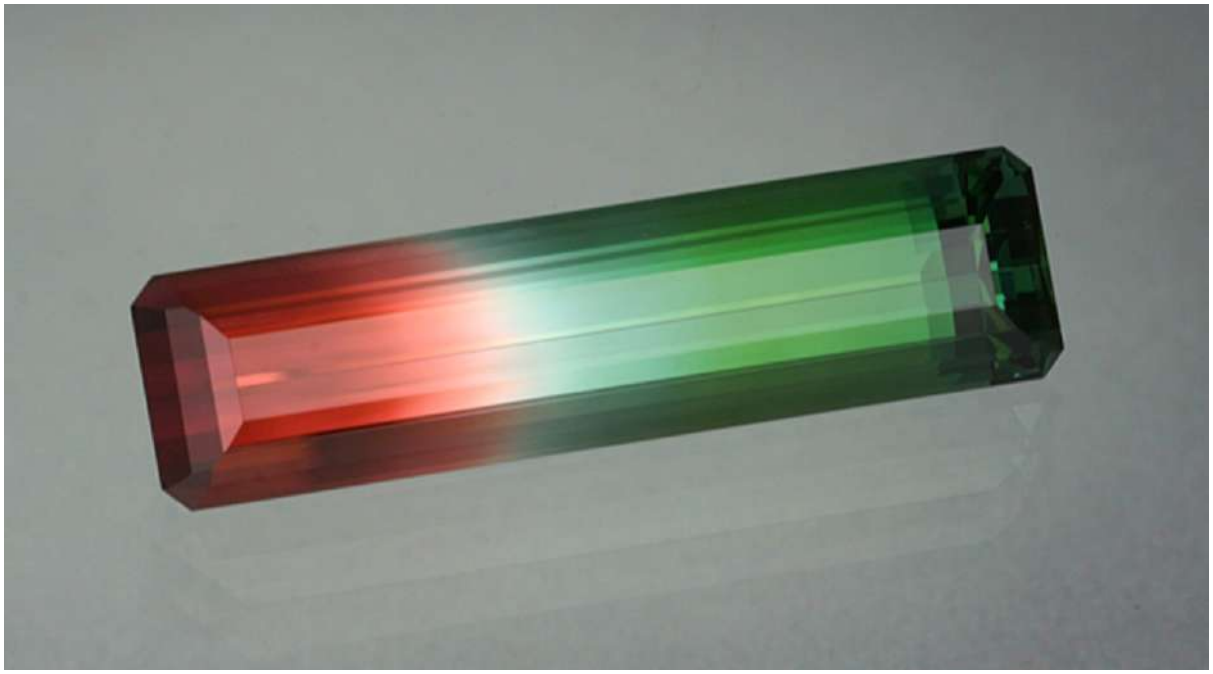
Overall, the prices for the best Paraiba tourmaline gemstone easily surpasses other tourmaline stones due to the attractive hues, higher colour saturation, and its rarity. A direct comparison with other tourmalines makes the difference fairly visible to the viewer.

These Paraiba tourmalines can be clearly distinguished from the other tourmaline gemstones discussed above based on its saturated hues and light to medium tones. Representing the colour ranges are: 2.59-carat turquoise blue triangle cut, a 3.28-carat electric blue pear-shaped and a 3.68-carat green pear-shaped tourmaline (International Gemstone Society, n.d)**.**

4.2.1.5 Watermelon Colours

The watermelon, bicolour and multicoloured zoning occurs when the trace elements change in concentration or composition during the crystal's growth. Liddicoatite can show a striking and a complex zoning, and gems are often fashioned to showcase exotic colour combinations.

In some occasions, tourmalines are colour-zoned across the length of the crystal. A crystal that starts off with a pink crown may end up with a green tip. Or they can be zoned parallel to their length, so that a red crystal might show a green overgrowth (like the picture below). Dealers call these tourmalines as the watermelon due to their resemblance with the fruit.



The 11.21-carat watermelon tourmaline is an excellent example of both the gemstone material as well as the cutter's art. The stone showcases intense colour combination and a clear distinction between the zones at the highest clarity. (International Gemstone Society, n.d)**.**

4.2.2 Clarity of the Gemstone

Coloured tourmalines grow in an environment rich in liquids. Some of these liquids are captured as inclusions during the growth phase of the crystal. The most typical inclusions resemble a thread-like structure that runs parallel to the length of the crystal. Under magnification, it can be seen to demonstrate liquid or gas bubbles. If they are numerous enough and the rough is correctly refined, these tourmalines can create a beautiful illusion of a cat's-eye. The picture shows a greenish-blue Paraiba tourmaline gemstone with a cat's-eye inclusion.

Dealers usually literate red tourmalines with some eye-visible inclusions as long as the colour is strong and attractive. Inclusions that reach the surface and interfere with the brilliancy and polish make the gemstone much harder to sell. Although liquid inclusions are less visible in stones with stronger colour intensity, stones with prominent whitish inclusions (like the picture above) are usually undesirable.

It is not rare for other gemstones such as pink tourmalines to have eye-visible inclusions. Unless their sizes or the number of inclusions is distracting, knowledgeable consumers consider the colour to be the dominant value-driving factor. Green tourmalines are generally expected to be free from eye-visible inclusions. Therefore, any distracting inclusion would diminish the value of the gemstone. For other colours, tourmalines with no eye-visible inclusions are more valuable that those with inclusions that can be seen. It is fair to say, the more visible any eye-inclusions are on the gemstone, the higher the risk of the gemstone value dropping.

4.2.3 Cut of the Gemstone

The elongated shape of many tourmaline crystals has a direct impact on the finished gemstone's shape and proportion. As a result, there are many narrow, non-standard sizes available in the market. Some are found to be extremely attractive; however, majority of the gemstone buyers prefer these gemstones to have a standard dimension so that they are easier to set into standard mountings.

Cutters of these gemstones often fashion tourmaline stones as long rectangles. They do this by making the cut parallel to the length of the rough crystal to minimise any wastage of the crystal. In addition to the cutting preference, the optical properties of the gemstone are also taken into consideration.

Because of its pleochroic properties, these gemstones absorb more light going down the length rather than across. Crystals that appear pale green across its length can be very dark green – sometimes almost black when you look down its length.

4.2.4 Carat Weight of the Gemstone

Fashioned tourmalines in larger sizes rise considerably in per-carat pricing. Even though specimens can reach spectacular sizes, these are extremely rare. Because the supply of such sizes is rare, consumers are willing to pay a higher price to acquire these facet-quality rough material. For fashioned gemstones of similar colour and clarity, the price per carat generally increases as the gem passes the five-carat milestone.

Below is an image of a beautifully refined 11.18-carat tourmaline gemstone and its unusual design by a renowned gemstone cutter Bernd Munsteiner.

5 CHROME'S GEMSTONE PROCESSING SYSTEM

5.1 Introduction

Tourmaline stones, known for their wide array of colours and aesthetic appeal, undergo a detailed and multi-step processing journey before reaching the finished market. This comprehensive process involves extraction, rough sorting, cutting, heat treatment, polishing, and quality control, ensuring that the gemstones meet the high standards demanded by the jewellery industry. All these will be discussed in this chapter of the business plan.

5.2 Extraction Process (Pre-Processing Activities)

5.2.1 Geological and Site Preparation

The journey of a tourmaline stone begins with geological exploration to locate tourmaline-rich deposits. Chrome's geologists have employed various techniques, including aerial surveys, satellite imaging, and on-ground geophysical methods, to identify potential sites. Detailed mapping and drilling have also been conducted to estimate the deposit's size and quality.

5.2.2 Specific Extraction Techniques

Tourmaline is commonly mined using two main techniques:

Open-Pit Extraction This method is employed for deposits located close to the surface. The process involves the removal of overburden (soil and rock covering the deposit) using heavy machinery like bulldozers and excavators. The exposed ore is then extracted, typically using mechanical shovels or loaders.

Deep Extraction Techniques For deeper deposits, underground mining methods are utilized. Tunnels or shafts are dug to access the ore, which is then extracted and brought to the surface using lifts or conveyor systems. This method is more complex and costly compared to open-pit mining but is necessary for accessing deeper tourmaline deposits.

5.2.3 Initial Processing at the Site

Once extracted, the ore undergoes initial processing at the mine site to separate the tourmaline crystals from the surrounding rock. This involves crushing the ore to reduce its size and then using methods like hand sorting, sieving, and dense media separation to isolate the tourmaline crystals. The initial sorting is typically manual, relying on the visual identification of tourmaline's distinct colours and crystal forms.

5.3 Rough Sorting and Classification Process

5.3.1 Preliminary Sorting Process

After initial processing, the rough tourmaline stones are transported to a sorting facility. Here, the stones are subjected to preliminary sorting based on their size, color, clarity, and overall quality. This step is crucial as it determines the subsequent processing methods and potential market value of each stone.

5.3.2 Grading of the Gemstones

Tourmaline stones are graded based on several factors:

Color	The most significant factor, as tourmaline occurs in a wide range of colors. Stones are sorted into color categories such as green, blue, pink, red, and multi-colored.
Clarity	Stones are examined for inclusions and fractures. High-clarity stones are more valuable and require careful handling.
Size and Shape	Larger and well-formed crystals are preferred for cutting into larger gemstones.
Quality	Overall aesthetic appeal, which includes factors like color saturation and the presence of unique features like color zoning.

5.4 Cutting and Shaping

Cutting is a critical step that significantly impacts the final appearance and value of the tourmaline. Expert gem cutters (lapidaries) begin by examining each rough stone to determine the best way to maximize its beauty and minimize waste. They consider the stone's natural shape, colour zoning, and any inclusions.

5.4.1 Sawing Process

The rough stone is first sawed into manageable pieces using a diamond-tipped saw. This step involves careful planning to ensure that the maximum amount of material is retained for further shaping and polishing.

5.4.2 Preforming Process

Preforming involves shaping the sawn pieces into a rough form of the final gemstone. The stone is ground against a spinning wheel coated with diamond grit to remove excess material and create the basic shape. This stage requires precision to ensure that the final cut will bring out the stone's best features.

5.4.3 Faceting Process

Faceting is the process of cutting the stone into a specific geometric pattern that enhances its optical properties. Each facet is carefully angled to maximize the stone's brilliance and colour. For tourmaline, the standard brilliant cut or step cut is commonly used, but other cuts like the emerald cut or cabochon are also popular, depending on the stone's characteristics.

5.5 Heat Treatment Process

5.5.1 Purpose of the Heat Treatment Process

Heat treatment is a common practice to enhance the colour and clarity of tourmaline. This process can lighten or darken the stone's colour, remove colour zoning, and improve overall clarity by healing fractures.

5.5.2 The Process

Stones are heated in a controlled environment, typically in a furnace, at temperatures ranging from 500°C to 700°C. The specific conditions depend on the stone's initial properties and the desired outcome. The heating process must be carefully monitored to prevent damage or unwanted changes in the stone's appearance.

5.6 Polishing of the Tourmaline Stones

5.6.1 Initial and Final Polishing of the Tourmaline Stones

After cutting and heat treatment, the stones undergo an initial polishing stage. This involves using progressively finer abrasives to smooth the stone's surface. Diamond powders or pastes are commonly used in this process.

The final polishing step gives the tourmaline its finished lustre. This is achieved using finer diamond pastes and polishing pads, which create a smooth, reflective surface. The goal is to enhance the stone's brilliance and colour, making it ready for setting in jewellery.

5.7 Quality Control

5.7.1 Inspection of the Tourmaline Gemstones

Quality control is an ongoing process throughout the tourmaline processing journey. After polishing, each stone undergoes a detailed inspection to check for any defects or inconsistencies. This includes examining the stone under magnification to ensure that the cut, clarity, and polish meet industry standards.

5.7.2 Certification of the Tourmaline Gemstones

High-quality tourmaline stones are often sent to gemmological laboratories for certification. These laboratories provide detailed reports on the stone's characteristics, including its colour, clarity, cut, and any treatments it has undergone. Certification adds credibility and value to the gemstone in the market.

5.7.3 Market Preparation

Once quality control is complete, the tourmaline stones are sorted into different categories based on their quality and size. This sorting is essential for marketing the stones to different segments of the jewellery industry.

5.7.4 Packaging and Distribution of Tourmaline Gemstones

Tourmaline stones are then carefully packaged to protect them from damage during transportation. Packaging typically includes cushioned boxes or pouches that prevent the stones from moving around and getting scratched

Finally, the processed tourmaline stones are distributed to various markets. This includes wholesale markets, gemstone dealers, and jewellery manufacturers. The stones are often showcased at gem and jewellery trade shows, where buyers can inspect them and make purchases.

5.8 Conclusion of the Tourmaline Gemstone Processing Method

The journey of tourmaline stones from the mine to the finished market is a complex and meticulous process. Each step, from extraction to distribution, requires specialised knowledge and skills to ensure that the stones reach their full potential.

Chrome's dedicated team will ensure careful planning, cutting, and treatment, raw tourmaline crystals are transformed into stunning gemstones that are highly valued in the jewellery industry. The rigorous quality control and certification processes further ensure that only the stones that have passed the quality control checks will make it to the market, meeting the high standards expected by consumers and jewellers alike.

6 INVESTMENT PLAN

6.1 Introduction

This section of the business plan details all the project development activities with its cost implications. This section also provides detailed information on major categories of expenditure for investment and the types of assets that will be necessary to be procured in order to fully set up the mining operation in Mkange. The capital expenditure is what is referred to as the investment cost that will be committed to in order to set up and operate the mining operations as proposed in this business plan.

6.2 Summary of the Capital Expenditures

The total investment expected to be done in order to facilitate operations of the mining establishment is estimated to be USD $600,000. The capital expenditure will be injected in one phase; i.e.: the beginning of the projection period. The table below summarises the investment plan be categories of capital expenditure. Figures are declared in TZS Millions.

Capital Expenditure	Year 1	Year 2	Year 3	Year 4	Year 5
Construction of Buildings	$ 100,000				
Motor Vehicles	$ 50,000				
Mining and Gemstone Processing Equipment	$ 400,000				
Furniture and Equipment	$ 50,000				
Pre-Op./Working Capital Costs	$ 420,000				
Total Investment	**$ 1,020,000**				

The remainder of this section of the investment plan will discuss the following major headings:

1. Construction of Buildings;
2. Procurement of Gemstone Processing; and,
3. Investments in other Assets.

6.3 Construction of Buildings

The plan is to construct buildings and structures to support the mining activities in Mkange, Bagamoyo. The administrative block will include civil works for administrative office space as well as the workshop facilities for the refinery and processing of the crystals after extraction. The costs are expected to range around USD $100,000.00.

6.4 Procurement of Gemstone Processing Equipment

In order to operate the mine, the promoters will be required to procure a range of machinery and equipment to support the mining and refinery of the gemstones. The total cost broken down with respect to the procurement of mining equipment and machinery is USD $400,000.00.

6.4.1 Excavators

Excavators are large machines used for digging and moving earth and rocks. These are used in open-pit mining operations to extract gem-bearing ore from the ground in order for the raw stones to be processed into marketable valuable stones. This machine is expected to cost a total of USD $130,000.00

6.4.2 Crushers

Crushers are machines used to break down larger rocks and ore into smaller pieces for further processing. They may be used in both surface and underground mining operations to prepare the extracted material for transportation and processing. The expected price of the crusher is USD $120,000.00

6.4.3 Trommels and Jigs

Trommels are referred to as cylindrical drum screens used to separate gemstones and other valuable minerals from the surrounding soil and rocks. They work by tumbling and sorting the material as it passes through a rotating drum.

Jigs are gravity-based separation devices used to concentrate gemstones and other heavy minerals from lighter minerals such as sand and gravel. They utilise a pulsating water flow to create a stratified bed of particles with heavier materials settling to the bottom while lighter materials are carried away.

6.4.4 Wash plants

These are stationery or mobile facilities equipped with water sprays, screens and other mechanisms for washing and separating gemstones from dirt and debris. They are commonly used in alluvial mining operations where gemstones are found in sedimentary deposits. The expected cost of the wash plant is USD $90,000.00

6.5 Other Asset Investments

6.5.1 Motor Vehicles

It is approximated that a total of USD $50,000.00 will be used in procuring motor vehicles that will allow the management and the operations of Chrome to be conducted seamlessly.

6.5.2 Furniture and Equipment

It is approximated that a total of USD $50,000.00 to be procured. These assets include computers, printers, communication tools, office furniture, fittings and any other assets that have not been listed in the categories above.

6.5.3 Working Capital Costs

Any expenditure that will be incurred during the construction and setup period prior to the commencement of the mining will be capitalised and recognised as pre-operational costs. These are costs that will be incurred in salary payments, running expenditure, professional fees and project management costs to setup and establish the mining operations. The estimated costs pertaining to this area is expected to be approximately USD $420,000.

7 HUMAN CAPITAL PLAN

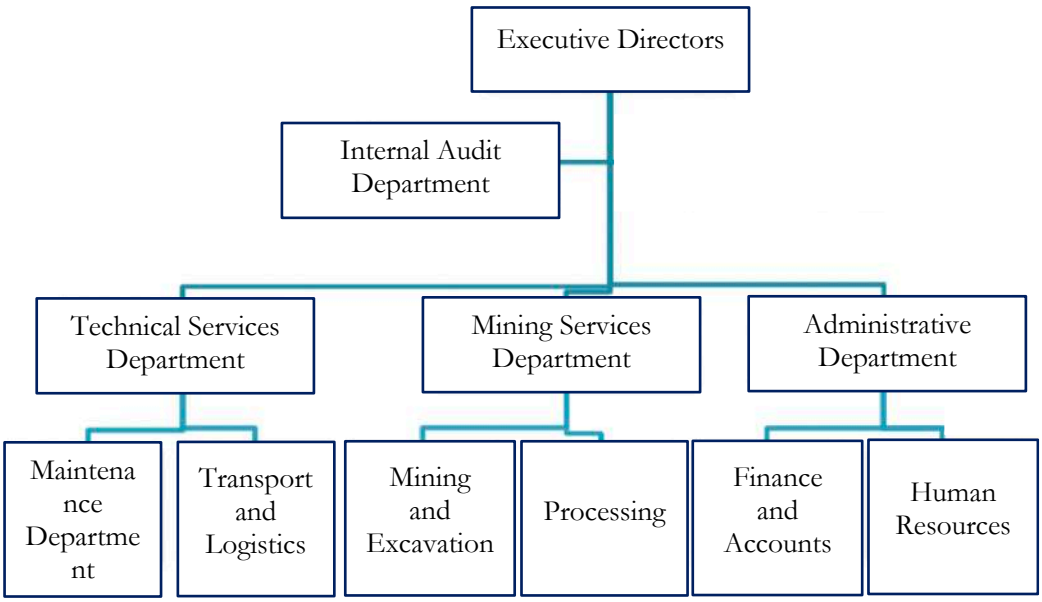
7.1 Introduction

This section sets the basis for understanding the management of the gemstone processing operations. This section also provides in-depth understanding on the Company's overall management, costing, involvement of staff/human capital in various activity drivers and the overall impact on the business' projections.

7.2 Organisational Plan

The shareholders understand that success of Chrome Mining Limited depends on the quality of human capital and its senior management. Therefore, the management will systematically direct and work closely with the operational team to ensure that the goals and objectives of the Company are met from a technical, commercial as well as a compliance sense. The day-to-day operations of the mining operations will be overseen by [the position of the in-charge]. The management will appoint a well-qualified [the position of the in-charge] with extensive experience in the mining sector. The organisational chart below shows the approved structure and reporting lines. The organisational chart is devised from a departmental lens.

The mining industry requires adequate controls in place to ensure preservation of shareholder wealth. An independent unit will be appointed to ensure that mining operations report reasonably their financial and operational performances to the shareholders without prejudice which will functionally report to the board and administratively report to the Chief Executive Officer.



7.3 Staffing Plan

7.3.1 Staffing Levels

Based on the proposed organisational structure below, it is estimated that the operation will create a total of 228 individuals by its fifth year of operations. During the setup phase, 58 will be employed for the first year and growing to 98 employees. The table below shows the expected staffing plan over the five-year period of these projections as well as the expected residential statuses of these employees on average.

Staffing Plan	Skilled	Year 1	Year 2	Year 3	Year 4	Year 5
C-Suite Executives	100%	3	3	3	3	3
Site Managers	100%	2	3	3	4	5
Office Managers	100%	3	3	3	4	5
Office Staff	80%	10	14	18	25	35
On-the-Ground Staff	75%	40	75	110	140	180
Total Human Resource		**58**	**98**	**137**	**176**	**228**

The following table provides an estimation of the number of local employees that will be employed within the workforce.

Staffing Plan	Year 1	Year 2	Year 3	Year 4	Year 5
C-Suite Executives	1	1	1	1	1
Site Managers	1	1	2	2	3
Office Managers	3	3	3	4	5
Office Staff	10	14	18	25	35
On-the-Ground Staff	35	70	103	130	170
Total Local Human Resource	**50**	**89**	**127**	**162**	**214**
Proportion of Local Staff Members	**86%**	**90%**	**92%**	**92%**	**93%**

7.3.2 Human Capital Policy

The shareholders of Chrome Mining Limited understand the importance of having an inclusive and a non-discriminatory human capital policy towards men and women. The Company will take the necessary steps to ensure that the employed workforce is diligent and is well compensated in accordance with their skillsets and experience levels. The recruitment policy will ensure that at least 80 percent of the workforce will be local Tanzanians. Whilst a detailed human capital policy has not been prepared at this stage of the project, the directors of the Company are driven to ensure that these policies revolve around the following principles:

7.3.2.1 Remuneration Policy

The current remuneration of the workforce in mining low and non-competitive in comparison with other sectors. To ensure that Chrome Mining Limited addresses this problem of adequacy compensation, the Company will adopt and implement effective motivational and encouraging pay structures for the workforce. Adequate salaries and other staff benefits will be provided to the workforce based on their hierarchy and on a non-discriminatory and inclusive basis. The directors believe that this will be a key component in retaining and motivating staff to carry out their roles and responsibilities diligently.

7.3.2.2 Recruitment Policy

The recruitment policy process will be fair and transparent which priority given to the local communities. Top level management will be recruited on the basis of their qualifications, competence as well as experience; whilst the jobs that do not require specific skills (i.e.: non-skilled laborers) will be filled with a large number of individuals from surrounding communities to boost income streams.

7.3.2.3 Capacity Building

The recruitment plan will be designed to hire competent and skilled staff as well as maintain their capacities against change in technologies, new customer servicing techniques, regulatory frameworks, accounting and tax structures as well as the general business environment. This project will endeavour to ensure that the workforce at all levels is provided with the necessary skills and training (internal and external) to maintain high quality outputs in the long term as well as short term facets of achieving organizational goals.

These trainings will be conducted by experienced in-house executives and where possible, independent consultants to promote and achieve the highest possible results in human capital efficiency, knowledge retention and knowledge transfer.

8 IMPLEMENTATION PLAN

8.1 Implementation Plan for the Setup of the Mine

The project plan schedule below shows that it will take approximately 8 months to a year before the mining activities generates income. For the purpose of this business plan, it has been assumed that the mine will generate revenues in Year 2.

Task in Hand	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Construction of Buildings	■	■	■	■								
Importation of Machinery				■	■	■						
Installation and Commissioning							■					
Hiring of Company Staff						■	■					
Training of the Staff Members								■	■			
Pre-Operational Activities									■	■	■	
Commencement of Gemstone Processing												■

8.2 Operational Plan for the Setup of the Gemstone Processing Plant

The proposed mining site has an abundant deposit of gemstones. During the first year, there will be no production as the period will be used to import and setup the facility. During the first two years, it is expected that the production output will yield 500kg of gemstones thereby growing at the rate of 5 percent to 7 percent per annum. Below are the production schedules for the gemstone mining in years.

The schedule takes into account unforeseen factors which have been incorporated into the computations. The unforeseen factors have been accounted for by discounting the expected target extraction of the deposits by 10%. The after-discount figures have been used to compute the mine's profitability.

Department Section	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
The target extraction (kg)	**0.00**	**500.00**	**500.00**	**525.00**	**556.00**	**592.00**
Discounted Rate	**20%**	**20%**	**20%**	**20%**	**20%**	**20%**
Adjusted Production rates (kg)	**0.00**	**400.00**	**400.00**	**420.00**	**445.00**	**475.00**

9 FINANCIAL ANALYSIS

9.1 Introduction

This section presents financial plan, results of the financial analysis and future projections for the business plan. The main objective of the financial analysis is to examine both commercial profitability and economic viability of the proposed project. In other words, it examines whether the proposed investment would be able to generate adequate returns relative to its investment costs to cover operational and financial costs and undertake further investments.

The section begins by introducing the methodology, the basic assumptions of the financial model incorporated in the financing plan. It is then followed by a descriptive analysis of the value drivers that determine project's profitability. A summary of profitability analysis based on the projected financial statements is presented, followed by an economic viability assessment. Finally, the resulting financial projections are provided thereon.

9.2 Financial Projections

9.2.1 Methodology

In preparing the financial forecasts, a value driver methodology has been used, which is also consistent with modern corporate financial theories. This methodology is a powerful tool for analysing the financial feasibility and economic viability of investment projects. Under this approach, the shareholders' value in terms of the expected free cash flow is evaluated based on three generic key value drivers of business: growth, returns and risks. In turn, these generic value drivers are analysed to identify specific value drivers of particular business, taking into account the prevailing economic situation, its industry structure and the regulatory environment.

The shareholders' value analysis uses the Discounted Cash Flow (DCF) methodology. Under this methodology, the projected free cash flows, which depend on business value drivers, are discounted at a rate that reflects the level of risks associated with the investment (the cost of capital). The final value, which is also known as Net Present Value (NPV), is a robust yardstick for project's economic viability. A positive NPV means that the project is economically viable. In order to supplement the NPV criterion for evaluating projects viability, the Internal Rate of Return (IRR) and the Profitability Index (PI) are normally used.

The IRR is used to benchmark result of a project against management's minimum required rate of return (hurdle rate). A project considered economically viable if its IRR is greater than the cost of capital, which is the discount rate applied on the projected free cash flows. The PI measures the rate at which expected future cash flows will exceed the initial capital investment. A project is considered to be economically viable if the PI index is greater than one. The value driver methodology has been used in analysing the financial feasibility of the proposed project.

9.2.2 Financial Modelling

The financial model is a powerful tool for assessing the management's market and operational assumptions and for understanding how different business decisions may impact the project's performance. Therefore, based on investors' business assumptions, the financial model has been used to map out the cause-effect relationships of value drivers and present them in the projected set of financial statements and performance measures, which are Net Present Value (NPV), Internal Rate of Return (IRR), Profitability Index (PI) and Payback Period (PBP).

In this analysis, the financial model was built over five-year duration. The period is inclusive of the development plan as shown in this report. However, a five-year period has been chosen to demonstrate to the project evaluators that under the long-term plan that the project is viable and potential for higher returns. All financial values presented are denominated in the local currency (TZS).

9.2.3 Basic Assumptions Incorporated in the Model

Financial modelling of future business operations depends on a number of key assumptions. There are some underlying macro level assumptions, such as inflation, taxation and exchange rates, which are beyond the control of the management. Further, there are also some basic assumptions, which depend on management capacity to prepare and implement business policies and strategies. Below is a brief description of the major assumptions used in this financial model.

- Real GDP growth – throughout the projected period, it is assumed a constant minimum gross domestic product (GDP) rate of 5.1 percent per annum. The growth rate is also assumed to grow around 5.1 percent per annum.
- Inflation - the inflation is expected to be around 5.0 percent per annum for the local currency (TZS) and around 3.5 percent for the foreign currency (USD) over the duration of projection period i.e., 5 years. However, the projections were made on constant prices exclusive of inflation rates.
- Taxation – It is assumed that the tax rate of 30% to prevail throughout the projection period
- Exchange Rates - the prevailing inflation rate differential between Tanzanian Shilling (TZS) and USD is assumed to be the best proxy for the future exchange rates determination. In this regard, the base period exchange rate is assumed to be TZS 2,600 to a US dollar and the future exchange rates are determined by the difference in inflation rates of TZS to USD.
- Depreciation - The depreciation charges have also been built in the financial model. These charges are used to accumulate surplus reserves from internal cash flows, which could be used for future replacement of various assets.

9.3 Source of Funds

To achieve the expected results, the Company requires financing to setup the required capacity and deliver the produce as stipulated in this business plan. The total financing required is tabulated below which shows the capital requirement for the first year. Chrome Mining Limited plans to finance this level of capital requirement fully using shareholder's equity. Therefore, total sources of fund to the project are estimated to be USD $. Because this project is financed entirely using shareholder funds, it is assumed that all operational costs and working capital requirements will also be funded by the shareholders.

9.3.1 Cost of Capital

The Capital Asset Pricing Model (CAPM) is a tool that is used to compute the cost of shareholder's equity and describes the relationship between systematic risk, or the general perils of investment and the expected returns for assets. The model is based on the relationship between the base risk-free rate of return (usually from government bills/bonds) and adjusted with the project's risk levels.

The computed cost of equity represents the returns expected by the shareholders to compensate for the risks associated with investing in the Company. This section of the business plan will elucidate the cost of equity. This rate will also be used in computing the NPV of the project.

$$ER_i = R_f + \beta_i (ER_m - R_f)$$

Where the following are the definitions of the constants:

ER_i	Expected Rate of Return of the Investment or Cost of Equity Capital
R_f	Risk-free rate of return (extracted from the government risk-free investments)
β_i	Expected Beta of the Investment
$(ER_m - R_f)$	Market Risk Premium

The assumptions that have been taken into account in the computation of the CAPM tool for calculating the cost of equity capital for the shareholders are as follows:

1. The shareholders do not want to undertake unnecessary risks and will reduce any risk profiles as much as possible. In other words, the shareholders are assumed to be risk-averse by nature.
2. The shareholders are willing to invest the funds injected into the business at the risk-free rate of return. Any additional return that will be earned is deemed as a bonus for the necessary business risks undertaken and the ability of the Company to manage them.
3. There are no material transaction costs in the transfer of equity capital into Chrome Mining Limited.
4. The shareholders expect an average return of the cost of equity capital computed by the CAPM model.

9.3.1.1 Collection of Data for the Cost of Capital

Component	Justification of the factor used	Factor
Risk Free Rate	This business plan factors a financial projection of the project for a period of 5-years. In this case, the expected risk-free rate that has been computed is extracted from the government returns of a 5-year bond from the Bank of Tanzania's investment returns publication.	8.60%
Asset Beta (Volatility)	There are no mining or gemstone processing companies that are listed in the DSE. Hence the availability data in assisting market volatility assessment for the mining sector was not done. However, since the Tanzanian stock market is not volatile, the investment volatility has been assumed at the standard rate.	1.00
Market Risk Premium	The DSE market has been growing earnings at an average annual rate of 15.3 percent. The DSE's return on equity as at 31st December, 2023 has been computed at 16.2 percent (Simply Wall St., 2024).	16.2%

9.3.1.2 Computation of the Cost of Capital

After availing the data and the justification of the components of CAPM, this section will now quantify the cost of equity capital for the all-equity funded capital structure provided below:

$$ER_i = R_f + \beta_i (ER_m - R_f)$$

$$ER_i = 8.60\% + 1.00 (16.20\% - 8.60\%)$$

$$ER_i = 8.60\% + 1.00 (7.60\%)$$

$$ER_i = 8.60\% + 7.60\%$$

$$ER_i = 16.2\%$$

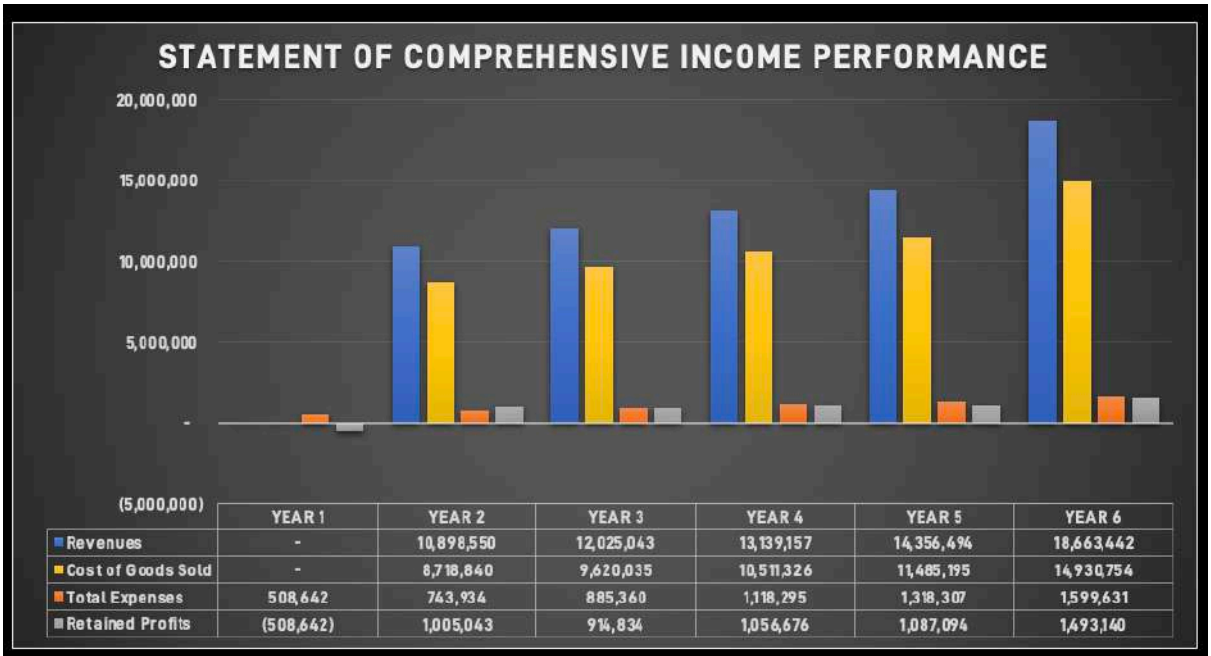
Based on the data collected and the factors used, the ideal cost of equity capital for Chrome Mining Limited is quantified at 16.2 percent. In other words, this is the expected returns that the shareholders are willing earn from the mining operations. Additionally, the computed cost of equity capital will be used as the Company's discount factor in projecting NPV and computing other investment analysis projections.

9.4 Projected Financial Statements

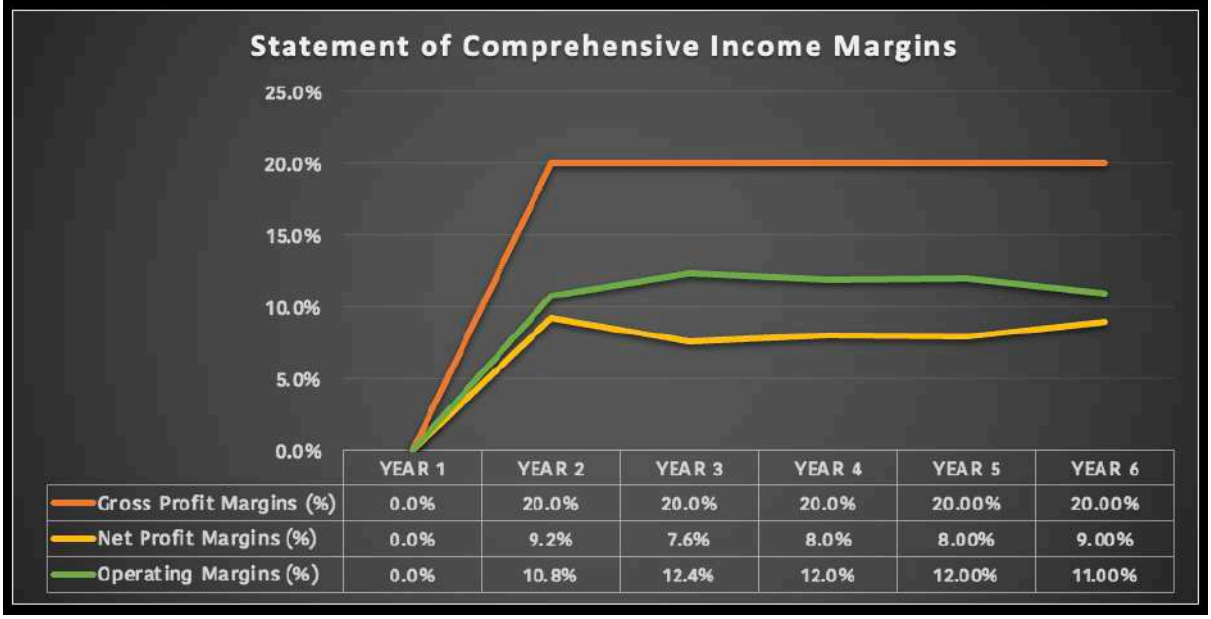
9.4.1 Projected Profit of Loss Statement for the Project

Projected profit and loss accounts for project shows promising results over the projection period. The project is expected to generate net profits after tax for the projection period following construction period. There is no tax charge projected for the first year as the operational costs and growth period as it is assumed that the company will report a net loss, and will be carried forward. The capital investment on the machinery, structures and other assets will attract some capital allowance to offset taxable profits in the future.

The projected profit and loss account shows that from the first year of operation the project will require external working capital funding to match the production and to cover its operating costs. The graph below provides a highlight of projection results for the projection period.



	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Revenues	-	10,898,550	12,025,043	13,139,157	14,356,494	18,663,442
Cost of Goods Sold	-	8,718,840	9,620,035	10,511,326	11,485,195	14,930,754
Total Expenses	508,642	743,934	885,360	1,118,295	1,318,307	1,599,631
Retained Profits	(508,642)	1,005,043	914,834	1,056,676	1,087,094	1,493,140

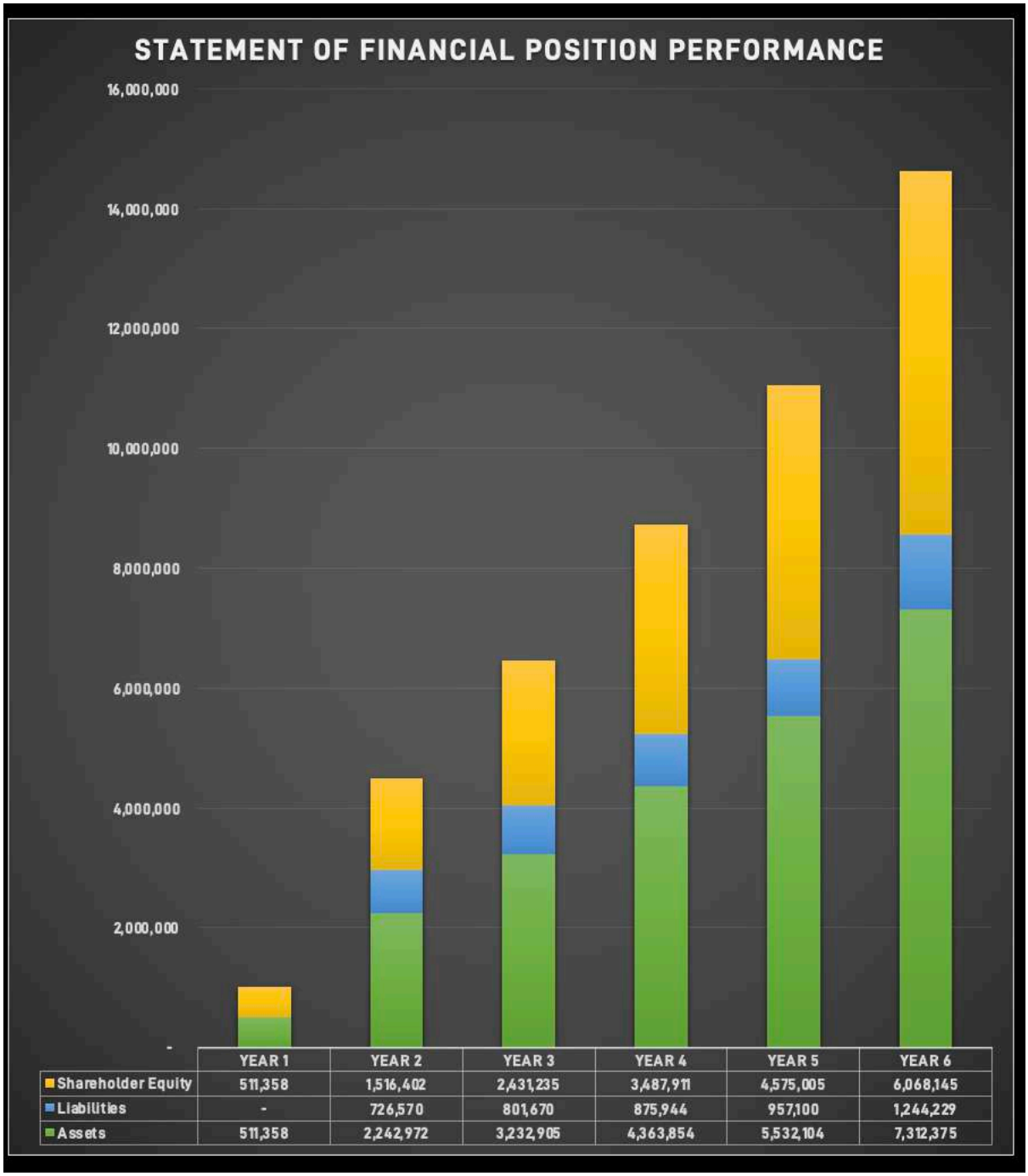


	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Gross Profit Margins (%)	0.0%	20.0%	20.0%	20.0%	20.00%	20.00%
Net Profit Margins (%)	0.0%	9.2%	7.6%	8.0%	8.00%	9.00%
Operating Margins (%)	0.0%	10.8%	12.4%	12.0%	12.00%	11.00%

9.4.2 Projected Assets and Liabilities Trends for the Project

The projected statements of assets and liabilities for the project shows a healthy status in both the long term as well as short term. This is due to the type of the machinery that has been procured which can allow scale up of production of nails without incurring additional CAPEX.

As a result, the savings in investments yield a faster return and accumulated profits which strengthen the statement of financial position. The details of the balance sheet are seen in the Annex A of this business plan.



	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Shareholder Equity	511,358	1,516,402	2,431,235	3,487,911	4,575,005	6,068,145
Liabilities	-	726,570	801,670	875,944	957,100	1,244,229
Assets	511,358	2,242,972	3,232,905	4,363,854	5,532,104	7,312,375

9.4.3 Projected Operating Cashflows for the Project

The cash flows statement provides information about the project's liquidity position and the breakdown of the sources and uses of its cash. The liquidity statement given below indicates a sound position for the project. However, this is before taking into account the future capital adequacy maintenance.

From the projected cash flows results, it is likely that each year the project will be able to generate positive cash from its operations. The surplus funds will be used to increase operating assets, replacing fixed assets, business diversification and or paying dividends to the shareholders at a later stage.

9.5 Project Assessment Viability

9.5.1 The Net Present Value (NPV)

The NPV is the present value of the future free cash flows, discounted at the required rate of return minus the initial investment. The free cash flows are discretionary cash left over after maintaining the business capital assets. In conclusion, free cash flows provide an indication of funds available for distribution and business growth. This is sometimes referred to as the measure of "whole" intrinsic (embedded) business value. Projects, which show a positive NPV, are considered to be viable.

The proposed project has an NPV of USD $7,426,216.48 on total investment during the projected period. This means that it has the potential of adequately compensating its initial investment within the projected period of five years, and give additional returns to its financiers.

9.5.2 The Internal Rate of Return

The internal rate of return (IRR) is defined as that rate which equates the present value of the cash outflows and inflows. In other words, it is the rate that makes the NPV equal zero. Hence, this is the rate of return on invested capital that the project is returning to the shareholders. A project is considered to be viable if the IRR is greater than its cost of capital; or in other words also known as the discount rate used. The higher the IRR, the more viable it is.

The project has an estimated IRR of 52.68 percent at Year 2, which is greater than the cost of capital of 16.2 percent that has been used in this financial model. The IRR obtained in this study could also be used to determine the benchmark or the hurdle rate, which is defined as the minimum required rate of return, over and above their cost of capital.

9.5.3 Profitability Index

The Profitability Index (PI) is another indicator that has been used to assess the viability of the project. The profitability index is defined as the ratio of present values of future cash flows to the initial capital investment costs. In other words, PI measures how the proportion by which the expected future cash flows will exceed the initial capital investment costs. The project is termed profitable if the PI is above one (1.00). At the end of the projection period, the project shows a profitability index of 15.38.

9.5.4 Project's Payback Period

Another project viability assessment tool is the payback period (PBP). The payback period is defined as the time required for the investment project to generate cash flows that would be enough to payback the initial capital investment. The shorter the payback period, the more profitable as well as less risky is the project. It is known that projects with longer payback periods are considered risky and requires a higher rate of investment returns from the financiers.

The returns are estimated based on the free cash flows before or after discounting. The projections show that the proposed project will have a normal payback period in the region of 2 years and 9 months for discounted free cash flows.

9.6 Summary and Conclusion

Based on the business assumptions and the country's macro-economic data which have been built into the financial model, the business plan shows that this project is financially feasible and economically viable and will deliver economic benefits to the community around the project. In this report, the promoters' estimates have taken into account on capital investment requirements, the existing and forecasted demands as well as growing business operating assumptions.

The financial data will be monitored upon implementation and will be managed accordingly for variance analysis and controls will be strengthen to ensure that the objectives and expectations of this project is achieved in the quality and returns required.

10 ECONOMIC ANALYSIS

10.1 Introduction

This section describes briefly the economic evaluation beyond the investors expected financial returns for the proposed mining operations in Mkange. The results of this operation extend directly and indirectly into the impact of economic and social welfare of large stakeholders of the project. This portion of the business aims to display the overview of the analysis of this project on various stakeholders:

10.1.1 Government Revenue

The operations will meet all its obligations to the government such as employment taxes, withholding taxes as well as the royalties from the sale of the gemstones. The government will collect a substantial amount of taxes from this venture.

10.1.2 Job Creation

Following the establishment of the operations, a minimum of 58 staff will be employed in the district. The employment will assist the local communities in enhancing their lifestyle. The promoters of this project consider creation of jobs as a positive contribution towards the government's policy on poverty alleviation.

10.1.3 Transfer of Technology

The promoters will invest in new mining equipment and the use of improved methodologies in mining for these gemstones. The knowledge will be passed on to the local communities so that they build on capacity and grow as a community.

10.1.4 Economic Linkages

The gemstones will be sold locally and internationally and will contribute towards the balance of payments as Chrome will be in a favourable position in receiving foreign exchange currency payments.

11 FINANCIAL STATEMENTS

11.1 Statement of Profit or Loss

Statement of Comprehensive Income (USD)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Revenue	-	10,898,550	12,025,043	13,139,157	14,356,494	18,663,442
Cost of Sales	-	8,718,840	9,620,035	10,511,326	11,485,195	14,930,754
Gross Profit	**-**	**2,179,710**	**2,405,009**	**2,627,831**	**2,871,299**	**3,732,688**
Expenses						
Operational Expenses	47,974	53,142	60,195	61,111	61,881	62,716
Human Resource Expenses	370,668	614,292	760,140	1,001,914	1,209,426	1,497,015
Depreciation & Amortization	90,000	76,500	65,025	55,270	47,000	39,900
Interest	-	-	-	-	-	-
Total Expenses	**508,642**	**743,934**	**885,360**	**1,118,295**	**1,318,307**	1,599,631
Earnings before Tax (EBT)	(508,642)	1,435,776	1,519,649	1,509,536	1,552,992	2,133,057
Taxes	-	430,733	604,815	452,861	465,898	639,917
Net Earnings	(508,642)	1,005,043	914,834	1,056,676	1,087,094	1,493,140
Dividend Payable	-	-	-	-	-	-
Transfer to Retained Earnings	**(508,642)**	**1,005,043**	**914,834**	**1,056,676**	**1,087,094**	**1,493,140**

Statement of Comprehensive Income's KPIs	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Gross Profit Margins (%)	0.0%	20.0%	20.0%	20.0%	20.00%	20.00%
Net Profit Margins (%)	0.0%	9.2%	7.6%	8.0%	8.00%	9.00%
Operating Margins (%)	0.0%	10.8%	12.4%	12.0%	12.00%	11.00%

11.2 Statement of Assets and Liabilities

Statement of Financial Position (USD)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Assets						
Cash and Bank	1,358	1,396,648	2,363,386	3,503,185	4,667,712	6,308,426
Trade and other Accounts Receivables	-	412,824	501,043	547,465	598,187	777,643
Current Assets	**1,358**	**1,809,472**	**2,864,430**	**4,050,649**	**5,265,899**	**7,086,070**
Non Current Assets	**510,000**	**433,500**	**368,475**	**313,205**	**266,205**	**226,305**
Total Assets	**511,358**	**2,242,972**	**3,232,905**	**4,363,854**	**5,532,104**	**7,312,375**
Liabilities						
Trade and other Accounts Payables	-	726,570	801,670	875,944	957,100	1,244,229
Current Liabilities	**-**	**726,570**	**801,670**	**875,944**	**957,100**	**1,244,229**
Total Liabilities	**-**	**726,570**	**801,670**	**875,944**	**957,100**	**1,244,229**
Shareholder's Equity						
Equity Capital	1,020,000	1,020,000	1,020,000	1,020,000	1,020,000	1,020,000
Retained Earnings (Prior Years)	-	(508,642)	496,402	1,411,235	2,467,911	3,555,005
Retained Earnings (Current Year)	(508,642)	1,005,043	914,834	1,056,676	1,087,094	1,493,140
Total Shareholder Equity	511,358	1,516,402	2,431,235	3,487,911	4,575,005	6,068,145
Total Liabilites and Shareholder's Equity	**511,358**	**2,242,972**	**3,232,905**	**4,363,854**	**5,532,104**	**7,312,375**

11.3 Statement of Cashflows

Statement of Cash flows (USD)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
CASH FLOWS FROM OPERATING ACTIVITIES						
Net earnings after taxes	(508,642)	1,005,043	914,834	1,056,676	1,087,094	1,493,140
Non-cash adjustments:						
Income taxes	-	430,733	604,815	452,861	465,898	639,917
Depreciation and Amortization	90,000	76,500	65,025	55,270	47,000	39,900
Change in Working Capital:						
(Increase)/Decrease in Account Receivables	-	(412,824)	(88,220)	(46,421)	(50,722)	(179,456)
Increase/(Decrease) in Account Payables	-	726,570	75,100	74,274	81,156	287,130
Cash from Operating Activities after Working Capital Change	**-**	**313,746**	**(13,120)**	**27,853**	**30,433**	**107,674**
Tax Paid (Current Year)	-	(430,733)	(604,815)	(452,861)	(465,898)	(639,917)
Net cash from Operating Activities	(418,642)	1,395,289	966,738	1,139,798	1,164,528	1,640,714
CASH FLOWS FROM INVESTING ACTIVITIES						
Acquisition of Non Current Assets	(600,000)	-	-	-	-	-
Net cash from Investing Activities	**(600,000)**	-	-	-	-	-
CASH FLOW FROM FINANCING ACTIVITIES						
Issue/(Repurchase) of Share Capital	1,020,000	-	-	-	-	-
Net cash from Financing Activities	**1,020,000**	-	-	-	-	-
Net changes in cash flow	1,358	1,395,289	966,738	1,139,798	1,164,528	1,640,714
Opening cash flow balance	-	1,358	1,396,648	2,363,386	3,503,185	4,667,712
Closing Cash flow balance	**1,358**	**1,396,648**	**2,363,386**	**3,503,185**	**4,667,712**	**6,308,426**

11.4 Operational Costs

OPERATION COST BREAKDOWN	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Repairs and Maintenance	3,000	3,600	4,320	4,752	4,990	5,239
Security Services	10,500	10,500	11,550	11,550	11,550	11,550
Electricity costs	18,000	19,800	21,780	21,780	21,780	21,780
Insurance Costs	4,474	5,592	6,990	6,990	6,990	6,990
Water and other Resources	4,000	4,400	4,840	5,324	5,856	6,442
Office Stationery	4,500	5,400	6,480	6,480	6,480	6,480
Cleaning and Hygiene	3,500	3,850	4,235	4,235	4,235	4,235
Depreciation and Amortization						
Total Operational Costs (USD)	**$ 47,974**	**$ 53,142**	**$ 60,195**	**$ 61,111**	**$ 61,881**	**$ 62,716**