

SHAFRO INTERNATIONAL GOLD MINING COMPANY LIMITED

P.O. BOX 4071, DAR ES SALAAM, TANZANIA

PROJECT PLAN

Construction and Operation of a Carbon in Pulp (CIP) Gold Processing Plant

Location: Nyamongo, Tarime, Mara Region, Tanzania

Submitted To: TANZANIA INVESTMENT CENTRE (TIC)

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Prepared By:

SHAFRO International Gold Mining Company Limited

Empowering Local Miners | Advancing Sustainable Development

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Preamble

This project plan outlines the proposed establishment of a carbon-in-pulp (CIP) gold processing plant by **SHAFRO International Gold Mining Company Limited** in Nyamongo, Tarime, Mara Region, Tanzania. The project is a cornerstone initiative aimed at supporting small-scale miners by providing reliable and efficient gold processing services while fostering economic growth in the region.

The document details the technical, financial, and operational aspects of the project, emphasizing SHAFRO's commitment to regulatory compliance, environmental sustainability, and community engagement. It also aligns with Tanzania's national goals of industrialization, resource value addition, and socioeconomic development.

SHAFRO International Gold Mining Company Limited respectfully submits this plan to the relevant authorities for consideration and approval, confident in its potential to deliver substantial benefits to the local mining community and contribute to Tanzania's economic progress.

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1. Executive Summary

SHAFRO International Gold Mining Company Limited, headquartered in Dar es Salaam, Tanzania, is a dynamic company that fosters innovation and sustainability in the mining sector. With a vision to empower small-scale miners and contribute to the sustainable development of the mining industry, SHAFRO seeks to establish itself as a pivotal player in the gold-processing landscape. Combining cutting-edge technology with a commitment to environmental stewardship, SHAFRO aims to revolutionize how gold ore is processed and traded in Tanzania.

The proposed project involves the construction of a state-of-the-art carbon-in-pulp (CIP) gold processing plant in Nyamongo, Tarime, Mara. Unlike traditional mining operations, this project will focus exclusively on gold ore processing, sourcing materials from local small-scale miners. The plant will also provide processing services to neighboring miners, enabling them to extract value from their ore through advanced leaching technology. This approach reduces operational risks and positions SHAFRO as a partner of choice for the local mining community.

The primary objective of this project is to establish a modern gold-leaching plant equipped with CIP technology to optimize gold recovery rates. The facility will be a critical enabler for small-scale miners in the region, who often face challenges in accessing efficient and affordable processing facilities. By offering reliable processing services, SHAFRO will empower miners to maximize their returns while maintaining transparency and fairness in transactions. The plant's design and operations will adhere to strict environmental and safety standards, reflecting SHAFRO's commitment to sustainability.

The expected benefits of the project are multifaceted. First, it will significantly enhance gold production efficiency in the Tarime region, contributing to increased output and profitability for

all stakeholders. Second, by providing a ready market and advanced processing services to local miners, SHAFRO will support the livelihoods of small-scale miners and their families, fostering economic inclusion. Finally, the project will act as a catalyst for regional economic growth, creating jobs during both the construction and operational phases, and stimulating supplementary businesses such as transportation, equipment supply, and local services.

This initiative is more than just a business venture; it is a testament to SHAFRO's dedication to transforming Tanzania's mining sector into a model of sustainable development. Through strategic partnerships with local stakeholders, adherence to best practices, and a strong focus on community benefits, SHAFRO is poised to make a lasting impact in Tarime and beyond.

2. Project Description

Project Scope

The SHAFRO International Gold Mining Company Limited project involves the establishment of a modern carbon-in-pulp (CIP) gold processing plant in Nyamongo, Tarime, Mara. This facility is designed to serve as a central hub for processing gold ore from small-scale miners and external clients in the region. The plant will incorporate advanced leaching technology with the capacity to process substantial volumes of gold ore, ensuring efficiency and cost-effectiveness. By providing a well-equipped, reliable facility, SHAFRO will bridge the gap in gold processing infrastructure that currently challenges local miners, empowering them to unlock greater value from their operations.

Operational Plan

The operational model is structured to maximize inclusivity and profitability for local stakeholders. SHAFRO will purchase gold ore directly from small-scale miners at competitive rates, offering them a transparent and consistent market. Additionally, the plant will provide leaching and processing services to neighboring miners who wish to bring their ore for extraction. These services will be offered at an affordable fee, ensuring accessibility for miners of all scales. This dual approach not only creates a direct revenue stream for SHAFRO but also strengthens the local mining ecosystem by addressing critical gaps in processing capacity and technical expertise.

Technology Used

At the heart of the project is the implementation of carbon-in-pulp (CIP) technology, a gold recovery method renowned for its efficiency and environmental benefits. This advanced technology involves dissolving gold into a solution before adsorbing it onto activated Carbon,

which ensures a high recovery rate and minimizes waste. Unlike traditional methods, CIP is both cost-effective and environmentally sustainable, reducing the environmental footprint of gold extraction. By adopting this technology, SHAFRO demonstrates its commitment to operational excellence, sustainability, and compliance with Tanzania's environmental standards.

Location Justification

The selected project site in Nyamongo, Tarime, Mara, offers strategic advantages that align with SHAFRO's objectives. The area is situated near several active mining zones, providing a steady supply of gold ore from local miners. Nyamongo's location also facilitates accessibility for miners and suppliers, reducing logistical challenges and transportation costs. Additionally, the region's established mining culture and workforce provide a supportive environment for operations, further enhancing the project's feasibility and long-term success.

By situating the processing plant in Nyamongo, SHAFRO not only capitalizes on its proximity to key resources but also ensures the project's relevance and direct contribution to the local community. This location is integral to fulfilling SHAFRO's mission of empowering small-scale miners while fostering economic growth and environmental stewardship in Tanzania.

3. Market Analysis

Target Clients

The primary target clients for SHAFRO International Gold Mining Company Limited's carbon-in-pulp (CIP) processing plant are small-scale miners and neighboring gold miners in Nyamongo and the surrounding areas. Small-scale miners often face significant barriers in accessing reliable and affordable gold processing facilities, leaving them unable to maximize the value of their ore. Additionally, neighboring miners with ore deposits but limited processing capacity are poised to benefit from the plant's advanced services. By focusing on these client groups, SHAFRO addresses an underserved market while fostering inclusivity and economic empowerment within the mining community.

Market Demand

The demand for efficient gold processing services in the Tarime region is exceptionally high. This demand is driven by the increasing activities of small-scale miners and the growing recognition of gold as a vital economic resource. Despite their potential, many miners lack access to modern processing technologies, leading to suboptimal recovery rates and economic losses. SHAFRO's plant will fill this critical gap by providing a centralized, state-of-the-art facility capable of handling the processing needs of local miners. By doing so, the company positions itself as a vital enabler of regional mining growth and a trusted partner for local stakeholders.

Competitive Edge

SHAFRO's competitive advantage lies in its integration of advanced carbon-in-pulp (CIP) technology and its client-focused operational model. CIP technology is recognized for its exceptional gold recovery rates, surpassing traditional methods in both efficiency and

environmental sustainability. This ensures that clients receive maximum returns on their ore, fostering trust and long-term partnerships with SHAFRO.

Additionally, the company's cost-effective processing services distinguish it from other market players. By maintaining affordable service fees, SHAFRO ensures accessibility for miners of all scales, creating a broad and loyal client base. The combination of cutting-edge technology and competitive pricing not only enhances SHAFRO's market appeal but also solidifies its role as a transformative force in the regional mining industry.

Through this targeted approach, SHAFRO is poised to become a cornerstone of the local gold mining sector, driving innovation, economic inclusion, and sustainable development in Tanzania.

4. Technical Aspects

Plant Design

The proposed carbon-in-pulp (CIP) gold processing plant will feature a modern and efficient layout tailored to meet the processing needs of small-scale miners and external clients. The infrastructure will include state-of-the-art facilities such as ore crushers, leaching tanks, activated carbon recovery systems, and ancillary support systems. Each component is designed to optimize gold recovery while minimizing operational downtime.

The plant will be built with a robust processing capacity to handle a high volume of ore daily, ensuring prompt service delivery for miners. This capacity allows SHAFRO International Gold Mining Company Limited to meet growing demand while maintaining operational efficiency. Additionally, the design incorporates flexibility to accommodate varying ore grades, ensuring adaptability and consistent recovery performance across diverse inputs.

Environmental Considerations

SHAFRO is committed to aligning its operations with Tanzanian environmental regulations and global best practices in sustainability. The plant will be equipped with advanced waste management systems to ensure that all by-products and effluents are treated before disposal. These systems include sedimentation tanks, chemical neutralization units, and water recycling facilities, minimizing the ecological footprint of processing activities.

Moreover, the project will implement strict monitoring protocols to ensure compliance with environmental standards. Regular audits and assessments will be conducted to promptly address

any emerging environmental concerns. SHAFRO's dedication to sustainable practices not only ensures regulatory compliance but also strengthens its reputation as a responsible industry player.

Timeline

The project will follow a structured timeline to ensure timely completion and commencement of operations. Key milestones include:

1. **Project Inception and Planning (Month 1-3):** Detailed design, permitting, and procurement of materials and equipment.
2. **Construction Phase (Month 4-12):** On-site development of plant infrastructure, installation of processing equipment, and integration of environmental management systems.
3. **Testing and Commissioning (Month 13-15):** Trial runs of the facility to ensure operational readiness and alignment with performance benchmarks.
4. **Operational Launch (Month 16):** Full-scale operations commence, offering processing services to local miners and external clients.

This phased approach ensures that all technical, environmental, and operational aspects are meticulously addressed, allowing SHAFRO to deliver a reliable, efficient, and sustainable processing plant. With its focus on advanced design, environmental stewardship, and disciplined project execution, the technical framework reflects SHAFRO's commitment to excellence in gold processing.

5. Financial Plan

Budget Estimate

The financial requirements for constructing and operating the carbon-in-pulp (CIP) gold processing plant have been meticulously analyzed to ensure effective resource allocation. The total estimated budget is \$411,591, broken down into the following components:

1. Construction Costs:

Encompassing site preparation, civil works, structural installations, and infrastructure development, these costs constitute 30% of the total budget, amounting to **\$123,670**.

2. Equipment Costs:

Procurement of advanced machinery, including crushers, leaching tanks, activated carbon systems, and ancillary equipment, forms 35% of the total budget, estimated at **\$164,863**.

3. Labor Costs:

Hiring skilled personnel for both the construction phase and initial operational setup accounts for 15% of the budget, approximately **\$61,835**.

4. Operational Expenses:

Pre-operational and initial operational costs, including utilities, raw materials, and logistics, represent 10% of the budget, amounting to **\$41,223**.

Budget Summary Table

Budget Component	Percentage	Amount (USD)
Construction Costs	30%	\$123,670
Equipment Costs	35%	\$164,863
Labor Costs	15%	\$61,835
Operational Expenses	10%	\$41,223
Total	100%	\$411,591

This structured breakdown ensures that each project phase is adequately funded, balancing quality with cost-effectiveness to support the plant’s successful execution and long-term viability.

Revenue Projection

The plant is designed to generate revenue through two primary streams:

1. **Ore Purchases and Processing:** By buying ore directly from small-scale miners, processing it, and selling the extracted gold, SHAFRO anticipates a consistent income stream driven by steady local ore supply and high gold recovery rates.
2. **Processing Services:** External miners who bring ore for processing will pay a service fee, providing an additional, scalable revenue source.

Initial revenue estimates indicate that the plant will achieve profitability within its first operational year, supported by increasing demand for reliable and efficient gold processing services in the region. Long-term projections suggest sustained revenue growth as the plant cements its position as a leading processing hub in Tarime.

Initial projection for the next five years indicates the following revenue sources:

S/N	Production capacity (TONS)	Projection revenue in USD
Year 1	3	807,692.49
Year 2	5	1,346,153.84
Year 3	8	2,153,846.15
Year 4	11	2,961,538.46
Year 5	15	4,038,461.53

Funding Sources

To finance the project, SHAFRO International Gold Mining Company Limited will leverage multiple funding streams, including:

- **Equity Investment:** Contributions from company shareholders to establish a solid capital foundation.
- **Loans:** Securing financial backing from local and international financial institutions to cover construction and operational expenses.
- **Other Funding Arrangements:** Potential partnerships with mining cooperatives, development funds, or government initiatives to support small-scale miners and regional development.

This diversified approach ensures financial stability throughout the project lifecycle, enabling SHAFRO to deliver a high-impact processing facility while maintaining fiscal responsibility. By integrating detailed budget planning, realistic revenue forecasts, and robust funding strategies, the financial plan underscores SHAFRO's commitment to operational success and sustainable growth.

6. Regulatory Compliance

Licensing and Permits

To ensure the establishment and operation of the carbon-in-pulp (CIP) gold processing plant adheres to Tanzanian regulations, SHAFRO International Gold Mining Company Limited will obtain all requisite licenses and permits as mandated by the Mining Act of 2010 (as amended) and related legislation. Key permits and licenses include:

1. **Mineral Processing License:** Issued by the Mining Commission, this license authorizes the construction and operation of a mineral processing plant.
2. **Environmental Impact Assessment (EIA) Certificate:** Granted by the National Environment Management Council (NEMC), this certificate is mandatory to ensure the project aligns with

environmental sustainability and conservation standards as per the Environmental Management Act of 2004.

3. **Occupational Safety and Health Permits:** These are required under the Occupational Safety and Health Act, 2003, to guarantee workplace safety and compliance with national standards.
4. **Business and Tax Registration:** Securing registration with the Business Registration and Licensing Agency (BRELA) and the Tanzania Revenue Authority (TRA) to operate as a compliant business entity.
5. **Water Usage and Discharge Permits:** Necessary if the plant uses significant water resources, as regulated by the Water Resources Management Act, 2009.

SHAFRO will engage closely with the relevant authorities to ensure timely acquisition of these permits and full compliance with all procedural requirements.

Health and Safety Compliance

Worker safety and health are paramount, and SHAFRO is committed to adhering to Tanzanian mining regulations and international best practices to create a safe working environment. This commitment involves:

- **Implementation of Safety Protocols:** Comprehensive safety protocols, including regular risk assessments, training programs, and emergency response plans, will be in place to protect workers from occupational hazards. These align with the requirements of the Occupational Safety and Health Authority (OSHA).
- **Provision of Personal Protective Equipment (PPE):** All workers will be supplied with high-quality PPE, such as helmets, gloves, masks, and protective footwear, to minimize exposure to risks.

- **Regular Health and Safety Audits:** Periodic inspections will be conducted in collaboration with OSHA to ensure compliance with the Occupational Safety and Health Act, 2003.
- **Adherence to Mining Regulations:** The plant's design and operations will comply with the Mining (Safe Working and Occupation Health) Regulations, 2010, which govern safe working conditions and environmental safeguards in mining activities.

By proactively addressing regulatory and safety requirements, SHAFRO underscores its dedication to responsible operations and its alignment with Tanzania's regulatory framework. This compliance strategy not only ensures legal adherence but also fosters trust among stakeholders and reinforces SHAFRO's reputation as a reliable and ethical partner in the mining industry.

7. Community Engagement and Benefits

Job Creation

The establishment of the carbon-in-pulp (CIP) gold processing plant by SHAFRO International Gold Mining Company Limited will serve as a significant source of employment for the local community in Nyamongo, Tarime. During the construction phase, the project will create numerous short-term jobs for skilled and unskilled labor, contributing to immediate income generation for local workers. Once operational, the facility will provide long-term employment opportunities in various capacities, including plant operations, administration, logistics, and maintenance. Priority will be given to hiring local talent, fostering skill development, and ensuring the community benefits directly from the project.

Support to Small-Scale Miners

At the core of SHAFRO's mission is empowering small-scale miners by addressing the challenges they face in accessing reliable and affordable gold processing services. The plant will offer these miners a stable market for their ore, ensuring fair pricing and transparency in transactions. Additionally, SHAFRO's processing services will enable miners to achieve higher gold recovery rates, maximizing their profitability. This support strengthens the local mining ecosystem, enhances economic inclusion, and builds long-term partnerships between SHAFRO and the miners it serves.

Corporate Social Responsibility (CSR)

SHAFRO is committed to being a responsible corporate citizen and contributing meaningfully to the development of the Nyamongo community. As part of its Corporate Social Responsibility (CSR) strategy, SHAFRO plans to invest in projects that address the community's most pressing needs, including:

- **Infrastructure Development:** Supporting the construction and improvement of roads, water supply systems, and other essential infrastructure to enhance local living standards.
- **Education Programs:** Partnering with local schools to provide scholarships, learning materials, and capacity-building initiatives that empower the youth and improve access to quality education.
- **Health Initiatives:** Collaborating with health institutions to promote healthcare access and awareness campaigns on prevalent health challenges.

By integrating community engagement into its operations, SHAFRO aims to foster a harmonious relationship with local stakeholders and ensure the project delivers sustainable, broad-based

benefits. This approach reflects SHAFRO's recognition of the importance of social equity and its commitment to contributing positively to the region's socioeconomic development.

8. Risk Assessment and Mitigation

Identified Risks

The development and operation of the carbon-in-pulp (CIP) gold processing plant carry potential risks that SHAFRO International Gold Mining Company Limited has proactively identified to ensure they are effectively managed:

1. **Environmental Risks:** Potential impacts include waste mismanagement, effluent discharge, and ecological disturbances, which could arise during construction and processing operations.
2. **Operational Risks:** Challenges such as equipment breakdowns, supply chain disruptions, and workforce safety issues could affect the plant's efficiency and reliability.

3. **Financial Risks:** Fluctuations in gold prices, unforeseen operational costs, and delays in project execution pose financial vulnerabilities.

Mitigation Strategies

1. Environmental Risk Mitigation:

- **Compliance with Environmental Laws:** Adherence to the Environmental Management Act, 2004, ensures all operations meet strict environmental protection standards. SHAFRO will obtain and comply with the Environmental Impact Assessment (EIA) Certificate issued by the National Environment Management Council (NEMC).
- **Waste Management Plans:** Implementation of advanced waste treatment systems to manage tailings and effluents, including sedimentation tanks and water recycling units, will minimize ecological impacts. Regular environmental audits will ensure compliance with NEMC regulations and address emerging issues promptly.
- **Rehabilitation Measures:** In line with the Mining Act of 2010, SHAFRO will establish rehabilitation plans for areas affected by plant operations to restore them to their natural state.

2. Operational Risk Mitigation:

- **Equipment Maintenance and Redundancy:** Regular maintenance schedules and investment in backup equipment will reduce downtime caused by mechanical failures.
- **Worker Safety Protocols:** Stringent adherence to the Occupational Safety and Health Act, 2003, including comprehensive training programs, provision of PPE, and emergency response plans, will ensure a safe working environment.

- **Supply Chain Diversification:** Establishing multiple sourcing channels for raw materials and equipment will mitigate the risk of supply disruptions.

3. **Financial Risk Mitigation:**

- **Contingency Budgeting:** A reserve fund will be allocated to cover unforeseen expenses during construction and operations, ensuring financial stability.
- **Gold Price Hedging:** SHAFRO will adopt hedging strategies to protect against fluctuations in gold prices, ensuring predictable revenue streams.
- **Financial Oversight:** Regular financial audits, aligned with the Tanzania Revenue Authority (TRA) guidelines, will ensure transparency and efficient fund management.

By incorporating these mitigation strategies, SHAFRO demonstrates its commitment to responsible project management, environmental stewardship, and operational resilience. These measures not only ensure compliance with Tanzanian laws but also position SHAFRO as a proactive and reliable partner in the local mining industry.

9. Conclusion and Recommendations

Summary of the Project's Importance

The establishment of the carbon-in-pulp (CIP) gold processing plant by SHAFRO International Gold Mining Company Limited represents a significant step forward in enhancing Tanzania's mining and processing sectors. The project is aligned with the country's economic goals as outlined in the Tanzania Development Vision 2025, which emphasizes industrialization, job creation, and sustainable resource management. By providing a reliable processing facility for small-scale miners and fostering value addition within the local mining industry, this initiative directly contributes to economic growth, community development, and environmental stewardship in the Tarime region.

For SHAFRO, this project is a cornerstone in its mission to support and uplift Tanzania's small-scale mining ecosystem. It not only strengthens the company's operational capacity but also establishes its reputation as a socially responsible and environmentally conscious industry leader.

Request for Approval and Investment Authorization

Given the project's alignment with Tanzania's regulatory requirements and its potential to deliver widespread benefits, SHAFRO International Gold Mining Company Limited respectfully requests the relevant authorities to approve and authorize the investment. The comprehensive planning, risk mitigation strategies, and commitment to compliance detailed in this proposal highlight SHAFRO's readiness to execute the project responsibly and successfully.

SHAFRO seeks to collaborate closely with the government and other stakeholders to ensure that the plant operates within the framework of Tanzanian laws while maximizing its positive impact on the local community and economy. Approval of this investment will not only empower small-scale miners but also position Tanzania as a hub for sustainable and efficient gold processing in the region.

By granting the necessary approvals, the authorities will enable SHAFRO to commence a transformative project that will contribute significantly to the nation's economic and social development.