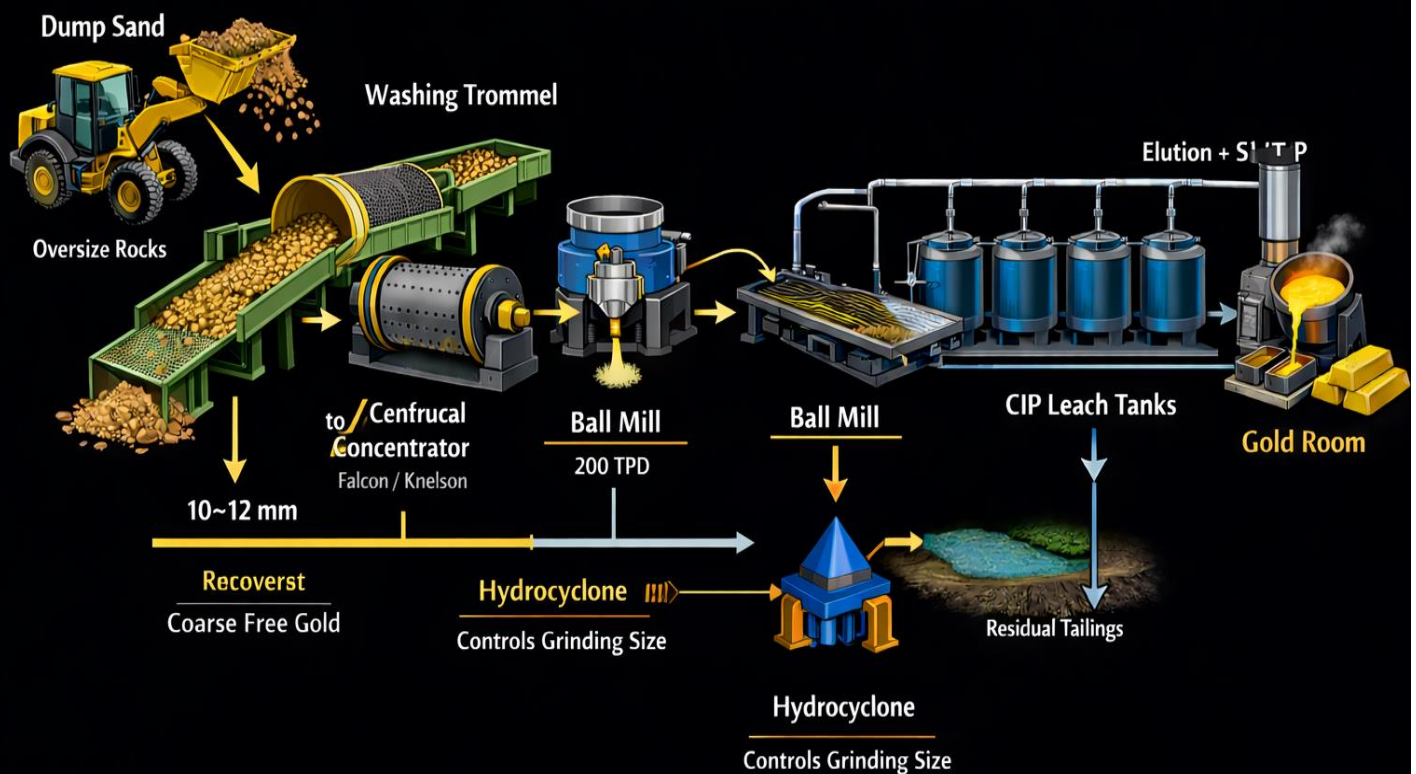


Total Project Capital Requirement for Gold Recovery & Processing Infrastructure

200TPD GOLD RECOVERY PROCESSING PLANT, WET PAN PROCESSING PLANT, VAT LEACHING PLANT

200TPD Gold Recovery Processing Plant

Low-Cost Gravity + CIP Gold Recovery Process: 200 TPD Plant



Low-cost dump plant design with gravity recovery before the ball mill

Gravity + CIP Recovery Plant

Capital Investment Proposal

Silobela, Zimbabwe

Confidential Investor Proposal

Prepared for:
Potential Investors & Strategic Joint Venture Partners

Project Location:
Silobela, Zimbabwe

Project Type:
Gold Tailings Recovery & Centralized Processing Plant

Processing Capacity:
200 Tons Per Day (TPD) – Gravity + CIP Recovery Plant

Executive Summary

This proposal outlines the estimated capital expenditure required for the establishment of a centralized 200TPD Gold Recovery Processing Plant designed to process:

- historical tailings,
- vat leached sands,
- low-grade ore,
- and customer milling residual material sourced from surrounding artisanal mining operations.

The proposed processing facility combines:

- gravity recovery,
- cyanide leaching,
- Carbon-in-Pulp (CIP) technology,
- and centralized gold recovery systems

to maximize gold extraction efficiency from both freshly mined and historically discarded material.

The project is strategically positioned within an active artisanal mining region in Zimbabwe with access to long-term feedstock supply through regional milling partnerships and historical tailings recovery opportunities.

Proposed Plant Processing Flow

The proposed plant design includes:

- Ore washing and classification
- Milling and grinding
- Gravity gold recovery
- Hydrocyclone classification
- CIP cyanide leaching
- Gold adsorption and recovery
- Electrowinning and smelting
- Tailings disposal management

Complete Equipment Inventory

Equipment	Quantity
Washing Trommel	1
Ball Mill	1
Centrifugal Concentrator	1
Shaking Table	1
CIP Tanks	6
Slurry Pumps	4–6
Hydrocyclone	1
Sumps	4–5
Reagent Tanks	3
Air Compressor	1
Electrowinning Cell	1
Smelting Furnace	1

1. Site Preparation

Before installation of processing equipment.

Item	Estimated Cost
Land Clearing	\$1,500
Excavation & Leveling	\$3,500
Plant Foundations (Concrete)	\$8,000
Tailings Dam Construction	\$6,000

Subtotal

\$19,000

2. Ore Handling Section

Washing Trommel

Item	Cost
Washing Trommel	\$18,000

Subtotal

\$18,000

Feed Hopper

Steel structure used for loading dump sand and ore material.

Item	Cost
Fabricated Hopper	\$3,500
Grizzly Bars	\$1,500

Subtotal

\$5,000

Vibrating Screen

Typical Size

1.2m × 3m

Purpose

Removal of oversize rock material.

Item	Cost
Vibrating Screen	\$9,000

Subtotal

\$9,000

Conveyor Belts

Three conveyor systems typically required.

Conveyor	Cost
Feed Conveyor	\$4,000
Mill Discharge Conveyor	\$3,500
Tailings Conveyor	\$4,500

Subtotal

\$12,000

3. Milling Section

Ball Mill

Typical Size for 200TPD

2.1m × 3m

Includes

- Gearbox
- Motor
- Liners

Item	Cost
Ball Mill Shell	\$55,000
Motor (150kW)	\$15,000
Gearbox & Drive	\$14,000
Steel Balls (Initial Charge)	\$12,000

Subtotal

\$96,000

Slurry Pump + Hydrocyclone

Used to control grind size and slurry circulation.

Item	Cost
Hydrocyclone	\$5,000
Slurry Pump	\$6,000
Piping System	\$3,000

Subtotal

\$14,000

4. Gravity Recovery Section

Centrifugal Concentrator

Examples

- Knelson Concentrator
- Falcon Concentrator

Item	Cost
Centrifugal Concentrator	\$35,000

Subtotal

\$35,000

Shaking Table

Example

- Wilfley Shaking Table

Includes feed pump system.

Item	Cost
Shaking Table	\$8,000

Subtotal

\$8,000

5. CIP Cyanide Section

Leach Tanks

For a 200TPD plant, 4–6 tanks are recommended.

Item	Cost
Steel Tanks (6)	\$35,000
Agitators	\$18,000

Subtotal

\$53,000

Carbon Adsorption System

Item	Cost
Carbon Screens	\$7,000
Activated Carbon	\$8,000
Carbon Transfer Pump	\$4,000

Subtotal

\$19,000

6. Elution + Gold Room

Gold stripping and smelting section.

Item	Cost
Elution Column	\$18,000
Electrowinning Cell	\$8,000
Gold Furnace	\$7,000
Gold Room Equipment	\$5,000

Subtotal

\$38,000

7. Water Supply System

Item	Cost
Water Tank	\$5,000
Pumps	\$4,000
Water Pipeline	\$3,500

Subtotal

\$12,500

8. Electrical Installation

Item	Cost
500kVA Transformer	\$18,000
Electrical Cables	\$9,000
Control Panels	\$8,000
Installation	\$7,000

Subtotal

\$42,000

9. Structural Construction

Item	Cost
Steel Platforms	\$15,000
Walkways	\$5,000
Equipment Supports	\$6,000

Subtotal

\$26,000

10. Installation & Labor

Item	Cost
Mechanical Installation	\$18,000
Electrical Installation	\$8,000
Welding & Piping	\$6,000

Subtotal

\$32,000

11. 2 × Tipper Trucks (UK Imports)

Size	Cost
22 Ton Trucks	\$28,000 each

Total Cost

\$56,000

12. Borehole Drilling (80m)

Total Cost

\$5,000

13. Water Tanks (20,000L) + Pump, Pipe System & Stand

Total Cost

\$6,500

14. Infrastructure Development

Includes:

- Offices
- Toilets
- Guard Room
- Store Room
- Workshop
- Staff Rooms

Total Cost

\$85,000

15. 4 Ton Truck

Total Cost

\$30,000

16. 2 × Vans

Total Cost

\$40,000

17. 1 × Vehicle

Total Cost

\$12,000

18. 2 × Motorcycles

Total Cost

\$4,000

19. Front-End Loader

Total Cost

\$65,000

20. Security Fencing

Total Cost

\$12,000

21. Tailings Dam & Pool

Total Cost

\$8,000

22. Tools & Machinery

Total Cost

\$10,000

23. First Operating Capital

Includes:

- Diesel
- Chemicals
- Labor
- Initial Ore Purchase
- Logistics
- Emergency Reserve

Total Cost

\$45,000

24. 500kVA Diesel Generator System

Item	Cost
500kVA Diesel Generator	\$55,000
ATS Changeover System	\$4,500
Generator Foundation	\$2,000
Electrical Connection & Cabling	\$6,500
Installation & Commissioning	\$4,000

Subtotal

USD \$72,000

25. Water Storage Infrastructure

2 × 10,000L JoJo Tank System

The processing plant requires reliable water storage capacity for:

- milling,
- slurry circulation,
- cyanide leaching,
- dust suppression,
- and operational backup reserves.

Includes

- 2 × 10,000L JoJo tanks
- Elevated steel stand
- Water piping system
- Booster pump system
- Pipe fittings & valves
- Installation works

Item	Cost
2 × 10,000L JoJo Tanks	\$3,500
Steel Tank Stand	\$2,500
Water Pumps	\$2,000
HDPE Pipe System	\$2,200
Pipe Fittings & Valves	\$1,000
Installation & Connections	\$1,800

Subtotal

USD \$13,000

26. Vat Leaching Tank System

Vat Leaching Infrastructure

Includes

- 12 × Vat Leaching Tanks
- 6 × Carbon Houses
- Slurry Pump System
- Piping & Installation Network

(i) 12 × Vat Leaching Tanks

Item	Cost
12 × Vat Leaching Tanks	\$7,200

Subtotal

USD \$7,200

(ii) Carbon Houses (6×)

Item	Cost
6 × Carbon Houses	\$2,700

Subtotal

USD \$2,700

(iii) Pipes & Installations

Item	Cost
Pipes & Installation Materials	\$2,400

Subtotal

USD \$2,400

(iv) Slurry Pump System

Item	Cost
Slurry Pump System	\$4,200

Subtotal

USD \$4,200

Total Vat Leaching System Cost

USD \$16,500

27. Wet Pan Processing Plant Setup

Wet Pan Processing Plant Equipment List

Equipment	Estimated Cost
1 × Hopper Feeder (8 Ton Bin)	\$4,500
1 × Conveyor #1 (B650 × 15m)	\$5,500
1 × Jaw Rough Crusher PE400×600 (20TPH)	\$12,000
1 × Conveyor #2 (B650 × 17m)	\$6,000
1 × Jaw Crusher PX250×1000 (20–30TPH)	\$16,000
1 × Conveyor #3 (B650 × 21m)	\$7,500
6 × Hopper Feeders (2 Ton Bin)	\$12,000

Equipment	Estimated Cost
6 × Electromagnetic Vibrator Feeders (GZ1)	\$7,500
6 × Round Mills / Wet Pans (5TPH)	\$108,000
6 × Simple Gold Centrifugal Concentrators (3TPH)	\$8,400
Electricity Box & Control System	\$6,000
Steel Structure & Shade	\$8,000
Slurry Pump System	\$1,500
Concrete Construction & Foundations	\$15,000
Water Pump System	\$2,000
HDPE Pipe System	\$3,500

Additional Recommended Infrastructure

The following items are strongly recommended for operational efficiency and long-term plant durability.

Additional Item	Estimated Cost
Electrical Cabling & Installation	\$4,000
Workshop Tools & Spares	\$3,500
Security Fencing	\$3,000
Lighting System	\$2,000
CCTV & Security System	\$2,500
Generator Backup Connection	\$3,500
Water Storage Tank	\$2,500
Tailings Collection Pond	\$2,500
Installation & Labor	\$8,000

Total Wet Pan Plant Cost

Category	Estimated Cost
Main Plant Equipment	\$907,500
Additional Infrastructure	\$31,500

Full Funding Requirement

Category	Cost
1. Gravity + CIP Recovery Plant	\$ 1,173,400
2. Wet Pan Ore Milling Plant	

3. Vat Leaching Plant	
4. Infrastructure	
5. Equipment	
Operational Capital	\$ 232,512
Contingency Capital (Reserve) 10%	\$ 140,591.20
Final Combined Project Total	\$ 1,546,503.20

Total Project Proposal Engagement Capital Requirement

USD \$ 1,546,503.20

Construction Timeline

Phase	Estimated Duration
Civil Works	3–4 Weeks
Equipment Delivery	4–6 Weeks
Infrastructure Installation	2–3 Weeks
Generator & Electrical Integration	1–2 Weeks
Plant Commissioning	2 Weeks

Total Estimated Timeline

Approximately 3 Months

Strategic Advantages of the Plant

- Centralized processing infrastructure
- Multiple integrated revenue streams
- Tailings recovery capability
- Gravity + CIP recovery efficiency
- Long-term feedstock supply potential
- Scalable operational design
- Regional artisanal mining partnerships
- Low-cost processing model

Investment Opportunity

We are currently seeking:

- strategic investors,
- equipment finance partners,
- and joint venture participants

to support the establishment and expansion of the proposed 200TPD Gold Recovery Processing Plant.

Potential partnership structures may include:

- Equity participation
- Joint ventures
- Revenue-sharing models
- Equipment financing agreements
- Technical partnerships

Technical Disclaimer

All figures presented within this proposal are preliminary internal capital estimates based on currently available supplier quotations, market pricing, and assumed project specifications.

Actual project costs may vary depending on:

- equipment supplier selection,
- shipping and logistics,
- exchange rates,
- final engineering design,
- site conditions,
- and installation requirements.

Further engineering studies and supplier quotations remain ongoing.

Contact Information

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