

# SOLUTIONS FOR SUCCESSFUL GOLD MINING OPERATIONS (HARD ROCK AND ALLUVIAL)

**Apexx Gold Mining Solution Private Limited** 

Making Hard Rock & Alluvial Gold Mining Operations more Efficient & Sustainable by providing technical consulting services.

We assist and guide in prospecting as well as exploring at depth like trenching and core drilling, with core logging & analysis. We also help to customize methods of mining and mineral processing, both for open pit and underground mining.

Our team of experts plan optimum production processes by managing the 3M's -Manpower, Machinery, and Material.

We also assist clients in the recruitment, evaluation, and training of manpower.

With us you get all services under one roof - consultancy services, engineering, design, procurement, installation, and commissioning of customized mineral beneficiation plants.

#### FOR HARD ROCK:



Plants of capacity up to 100 tonnes per hour



High recovery and enrichment ratioachieved with both physical and chemical techniques i.e., Floatation, Leaching, and CIP



Latest machinery selection for Crushing, Grinding, Screening, Gravity Separation & Beneficiation



Economical and latest methods of processing to achieve maximum concentrate enrichment



Guaranteed durability to run processes 24x7

#### **FOR ALLUVIAL:**



Cost-effective & efficient setups for small & medium scale gold mining operations



Multi-pass technology, including sluicing and centrifuging to enhance recovery



Reduce water consumption by implementing storage and de-watering technologies



Mobile as well as stationary units

#### **EXPERTS ON BOARD**



Mr. Kawaljit Singh Dhami Managing Director

Mr. Dhami has over 30 years of experience in consulting, business planning as well as managing various engineering industries including gold mining. He is a Mechanical Engineer and holds an MBA in Operations management as well as the Six sigma master black belt certification.



Mr. Shanth Kumar Technical Director (Mining & Geology)

Mr. Shanth Kumar is an eminent mining engineer and has over 4-decades of experience as project head with a premier gold producer in India. He specializes in Shaft Sinking, Mine Mechanized Development and Production, Survey, Geology, Ventilation, Rock Mechanics, Mine de-watering system, and Planning with software. He also has wide exposure to mining activities in Open Pit Mining as well as in Deep Metal Mechanized underground mines operating almost 1 Km below the surface.



Mr. Shankar Gouda Technical Director (Metallurgy)

Mr. Shankar Gouda has passion for innovation in Gold, Copper and Tungsten extraction. With over 5-decades of experience at top positions in mining operations, metal processing plants and R&D in India, he is an expert in Bio leaching, refining and assaying. He has also dealt with various types of ores in different geographies of the world viz. Tanzania, Armenia, Togo and Ghana.



Mr. Krishna Naik
Technical Director
(Engineering)

Mr. Krishna Naik is an experienced Charted Engineer with 30 years spent in operations and project management for large scale gold mining projects. He is a specialist in planning, designing, procurement, installation and commission of large-scale beneficiation plants. He is an expert in optimizing SAG mill & Ball mill and is familiar with different geographies viz. Armenia, Togo, Ghana and India.



Mr. Apsar Miya
Technical Director
(Mining & Geology)

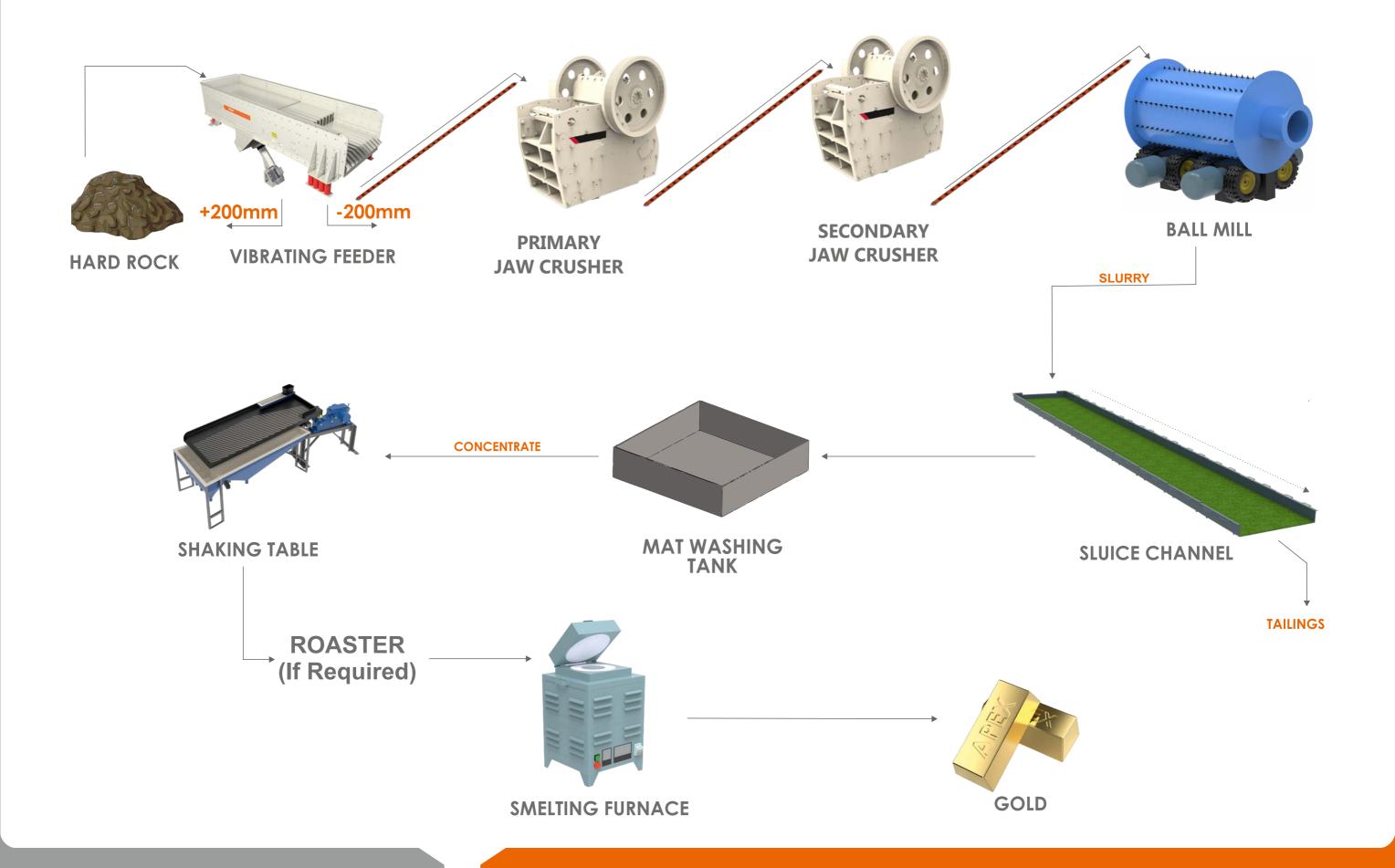
Mr. Apsar Miya is an experienced mining engineer with more than 4-decades of experience in different large-scale Gold mining operations. He is a seasoned mining expert with exceptional insights for hard rock mining, planning, organizing and implementation.

## HARD ROCK GOLD MINING PROCESSES & CAPACITIES

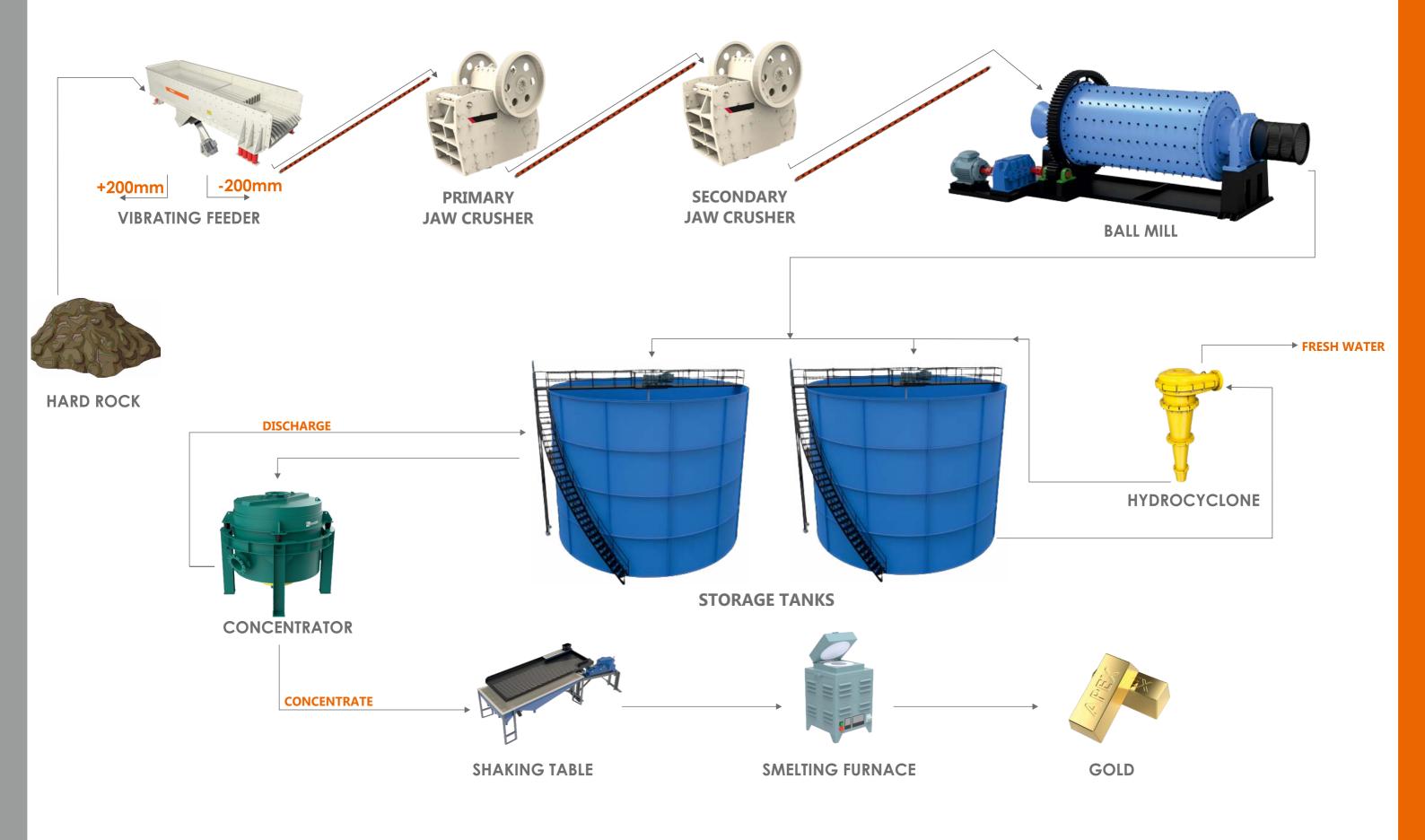
	MODERATE RECOVERY PROCESS	HIGH RECOVERY PROCESS	HIGH RECOVERY WITH CHEMICALS PROCESS		
MAIN EQUIPMENT	<ul> <li>Jaw Crusher</li> <li>Ball Mill</li> <li>Shaking Table</li> <li>Sluice Channels</li> </ul>	<ul> <li>Jaw Crusher</li> <li>Ball Mill</li> <li>Vibrating Screen</li> <li>Hydro Cyclone</li> <li>Storage Tanks</li> <li>Concentrator</li> <li>Shaking Table</li> </ul>	<ul> <li>Jaw Crusher</li> <li>Ball Mill</li> <li>Vibrating Screen</li> <li>Hydro Cyclone</li> <li>Concentrator</li> <li>Shaking Table</li> <li>Thickner</li> <li>LeachingTank</li> <li>Carbon In Pulp Process</li> </ul>		
CAPACITIES (SOLIDS)			• Electrolysis		
5 TPH	Moderate Recovery Process-21	This process is not viable at low capacity.			
15 TPH	Moderate Recovery Process-22	High Recovery Process-23	This process is not viable at low capacity.		
25 TPH		High Recovery Process-24			
50 TPH	This process is not suitable for high capacity.	High Recovery Process-25	High Recovery with Chemicals Process-27		
100 TPH		High Recovery Process-26	High Recovery with Chemicals Process-28		



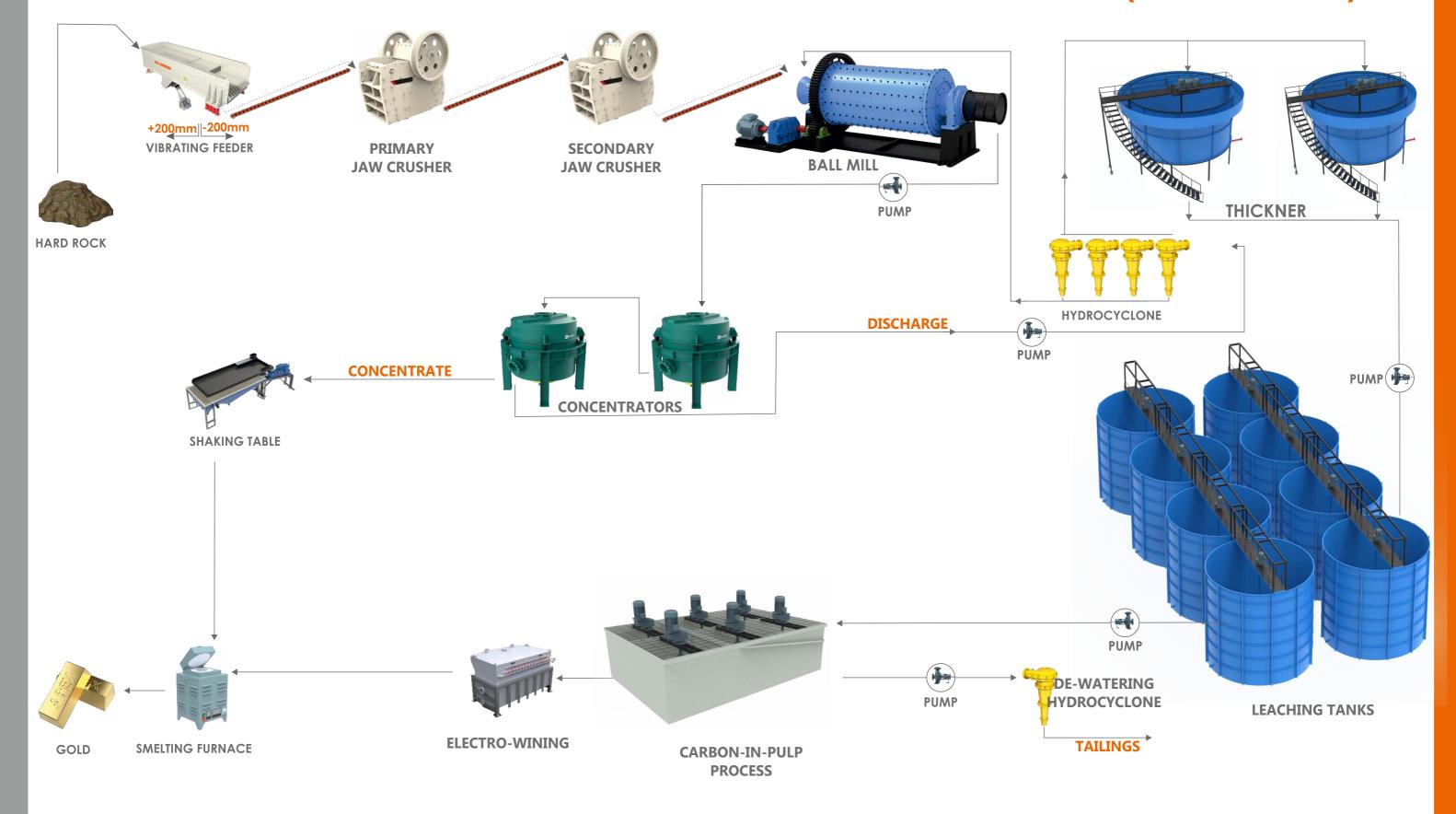
## **MODERATE RECOVERY PROCESS (5/15TPH)**



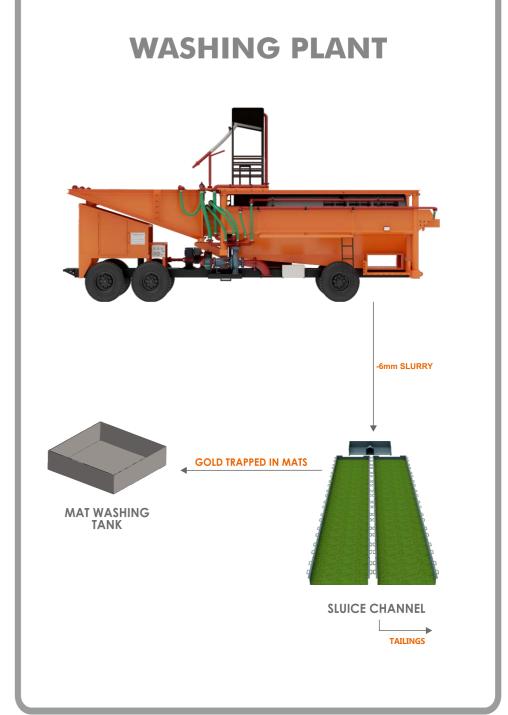
## HIGH RECOVERY PROCESS (15/25/50/100 TPH)



## HIGH RECOVERY PROCESS WITH CHEMICALS (50/100TPH)

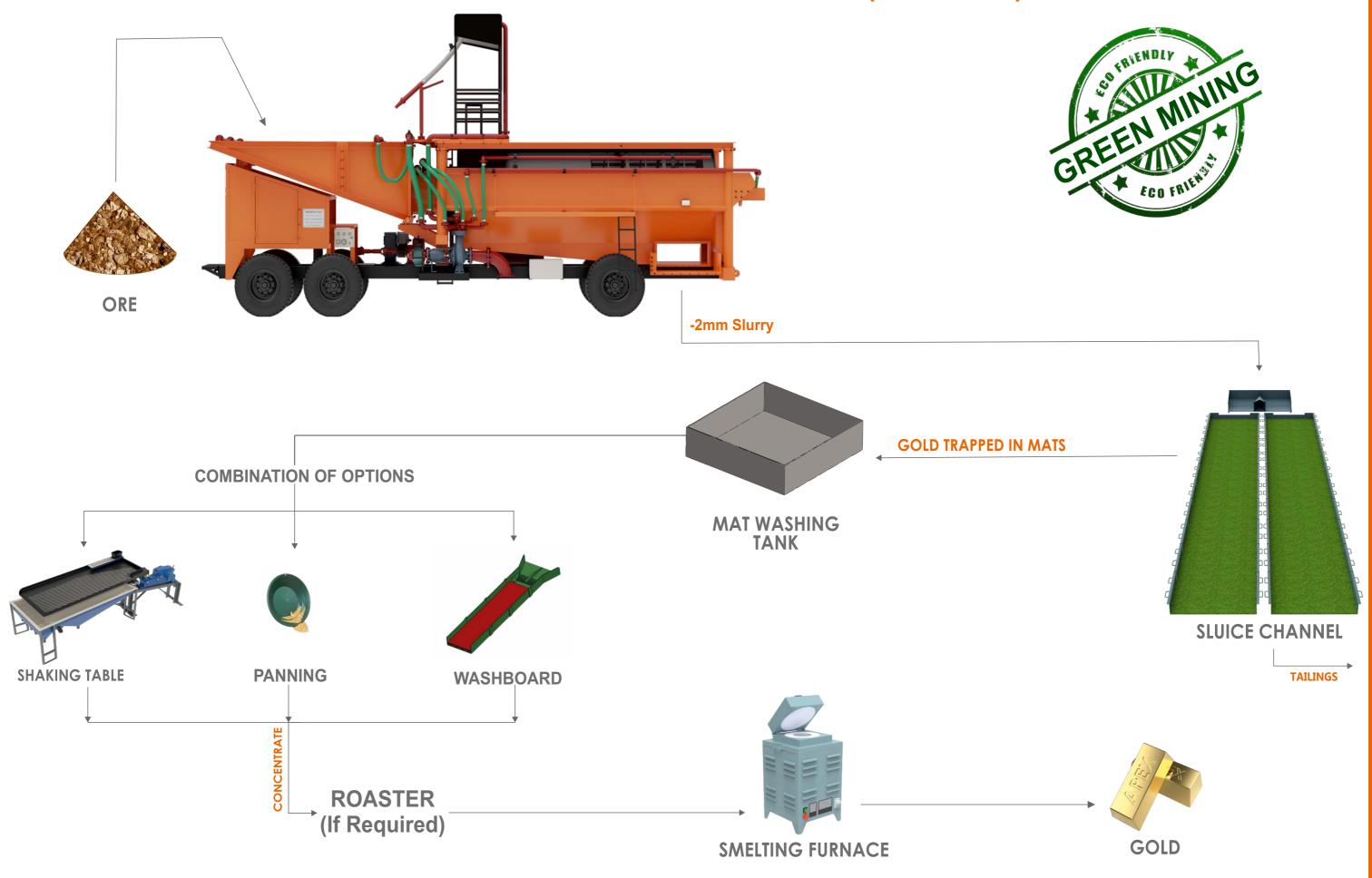




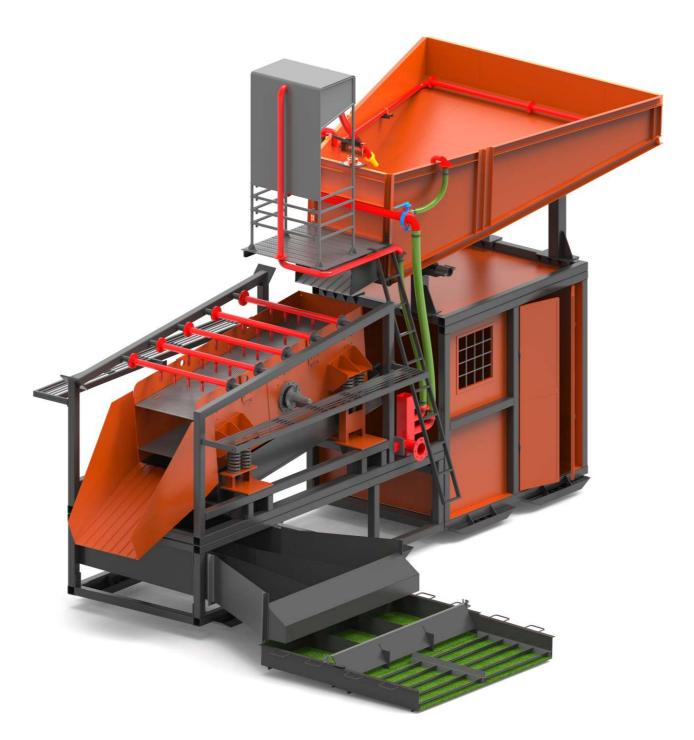


TECHNICAL SPECIFICATIONS	MODELS	Solid Feed (TPH)	Operational Capacity (TPH)	Trommel Length	Trommel Effective Dia.	Hopper Size	Engine Cylinders	Pump suction Flange	No. of Tyres	Adjustable Hopper Slope	Both side slurry channel
	M200	60	200	13'9"	60"	11'6" x 9'	4CYL.	5"	4	✓	
	M300	80	300	15'	60"	12' x 9'	6CYL.	6"	6	✓	$\checkmark$
	MM400	100	400	17'	70"	13' x 12'6"	6CYL.	8"	12		✓
	MM500	120	500	20'	79"	13' x 12'6"	6CYL.	8"	12		<b>√</b>

#### **MODERATE RECOVERY PROCESS (60/80TPH)**

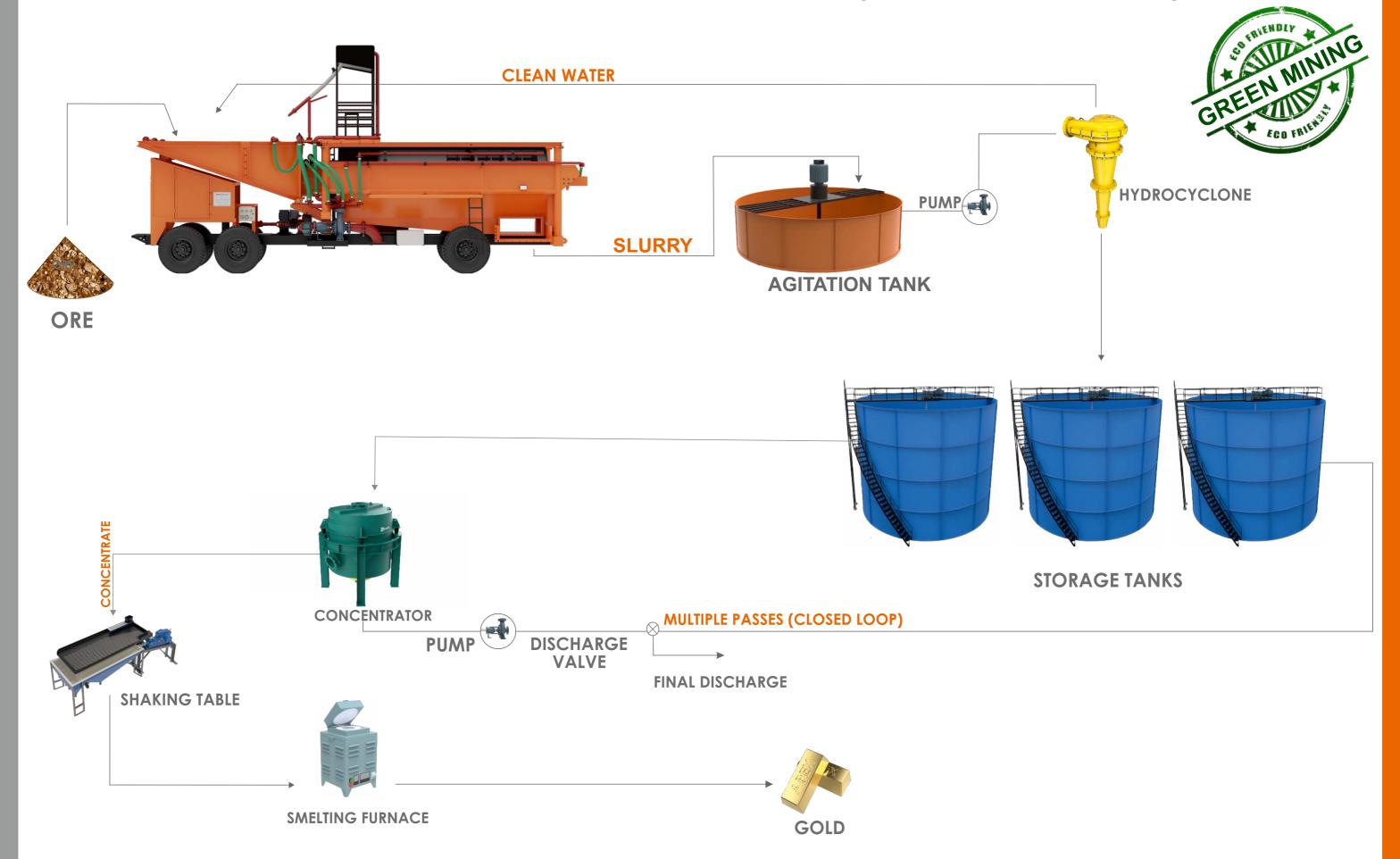


#### SHAKER DECK (60TPH)



★ VIBRATING SCREEN - 12'x4', 2 DECK WITH HIGH PRESSURE WATER NOZZLES ★ HOPPER - 12'x 9' WITH HIGH PRESSURE WATER MONITOR ★ PUMP - 6" SUCTION FLANGE ( MOTOR DRIVEN ) ★ RIFFLED SLUICE BOX ( OPTIONAL : ACTIVE RIFFLES) ★ SKID MOUNTED

### HIGH RECOVERY GREEN PROCESS (60/80/100/120TPH)



#### **EQUIPMENTS FOR PROSPECTING SUCCESS**





#### **Vibrating Feeder:**

These provide steady & controlled feed for downstream processing and are designed for both mobile as well as for stationary setups.



**Vibrating Screens:** These are designed to incorporate any type of screening size and media, both dry and wet.



**Shaking Table:** These tables are designed and manufactured to efficiently separate free gold from other lighter minerals and sand.



**Washing Plants:** These reliable and rugged machines for washing slurry are the result of years of field experience and excellent engineering.



Jaw Crushers: These reliable and productive machines have been developed to crush the hardest ores & rocks with outstanding performance



Elution (Carbon desorption) and Electro winning setup: In this setup Gold desorption & Electro winning is carried out efficiently & effectively in the Elution column and the Electro winning cell.



**Shaker Deck:** This is a gold washing plant designed to trap maximum free gold in its belly. This machine is especially developed for small scale alluvial mining.



**Hydro-cyclones:** These are known for their efficiency, reliability, & performance in particle size classification, desliming & dewatering processes.



**Floatation Machine:** This machine is used for agitation and frothing, to reduce concentrate and gang material ratio for economical operations.



**Steel tanks:** Proper design, construction & safety protocols are maintained in erecting these tanks for convenient storage of slurry.



**Concentrators:** These are designed to achieve highest recovery of free gold through optimum circuit performance.



**Gold Smelting Furnace:** These smelting furnaces are capable for extracting & refining gold from ore at high temperatures while maintaining all safety protocols.



**Ball Mills:** These highly advanced machines are specifically engineered for wet grinding, are low in power consumption and require minimum maintenance.



**Carbon in pulp (CIP):** This equipment is designed and manufactured to extract all the dissolved gold on activated carbon by adsorption.

## **ABOUT US**

Founded in 1996, Apexx Gold Mining Solution Private Limited is a leader in providing customized solutions for Gold mining consulting and engineering services.

APEXGME designs, manufactures and supplies a large range (5 to 500 TPH) of extraction systems for gold mining operations, where each machine is precisely engineered to meet the highest industrial standards.



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