



**TSOZA**  
**REFINARIA**  
**DE OURO DE**  
**MOÇAMBIQUE**



Tsoza Refinery



Presentation to;

# **9th Annual CASM Conference**

## **September 8 to 14**

A Global Partnership For Action

Presented by:

**DANCOR SPIES**

Chief Executive Officer  
TAU Holdings Ltd

15 Minutes



## **GOALS SET BY CASM**

- Goal 4 – Reduce Child Mortality
- Goal 5 – Improve Maternal Health
- Goal 7 - Ensure Environmental Sustainability
- Goal 8 - Develop a Global Partnership for Development



# THE CHALLENGE

- Eradicate and **BAN** from Mozambican soil the indiscriminate use of **MERCURY** and other **Metallic Chemicals**



## **THE RESULT**

- Mozambique to be the model, example and benchmark for the rest of the world to follow
- Improve mining methodology
- Increase mining efficiency
- Improved health benefits for miners
- Halt further damage to the Environment
- Social upliftment of mining communities



# MERCURY

- Most commonly used by Small Miners digging and panning for Gold
- Well known environmental impact
- Well known Health risks
- Well known exploitation of miners by Mercury Merchants



*“There is no single technological  
“**silver bullet**” to move to a  
mercury free system”*

**Dr. Kevin Telmer**

(2008 - University Of Victoria)



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# SILVER BULLET FOUND







# **THE DANCOR PROCESS™**

- Technology developed in AFRICA
- African solution for a worldwide problem
- Development took 7 Years and funded from own resources
- Technology to refine gold;
  - To a higher purity grade
  - Faster & Safer
  - More cost effective and with increased yield
  - Completely environmentally sound

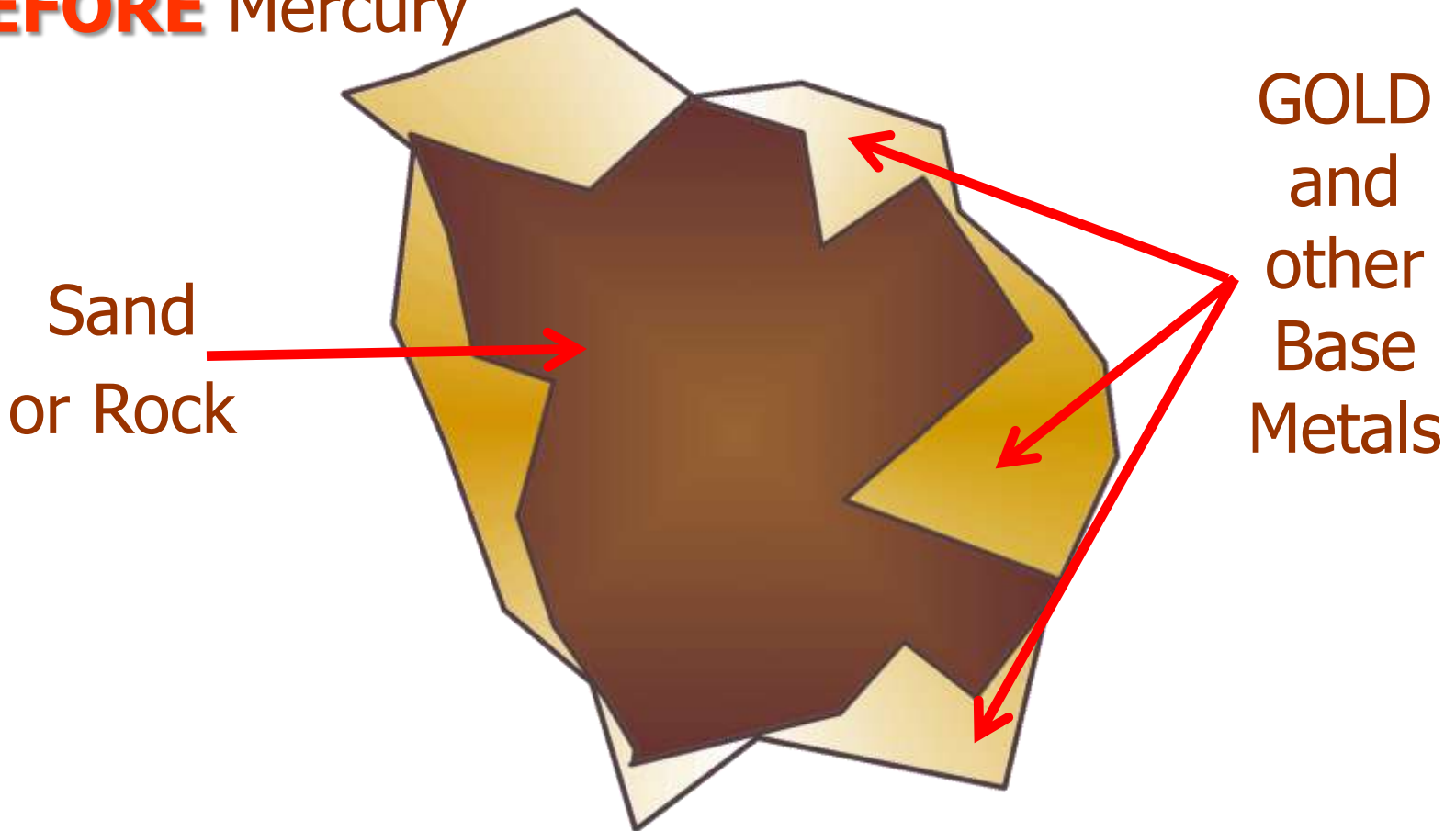


- This Hydro-Metallurgical ECO Technology entails:
  - Production cost saving of up to 35%
  - Less than US\$ 4.00 per kilogram Cost to Refine (excluding CAPEX)
  - Increased yield – additional ore to final product efficiency saving up to 25% when the use of mercury is discarded.



# A VERY CLOSE LOOK

**BEFORE** Mercury

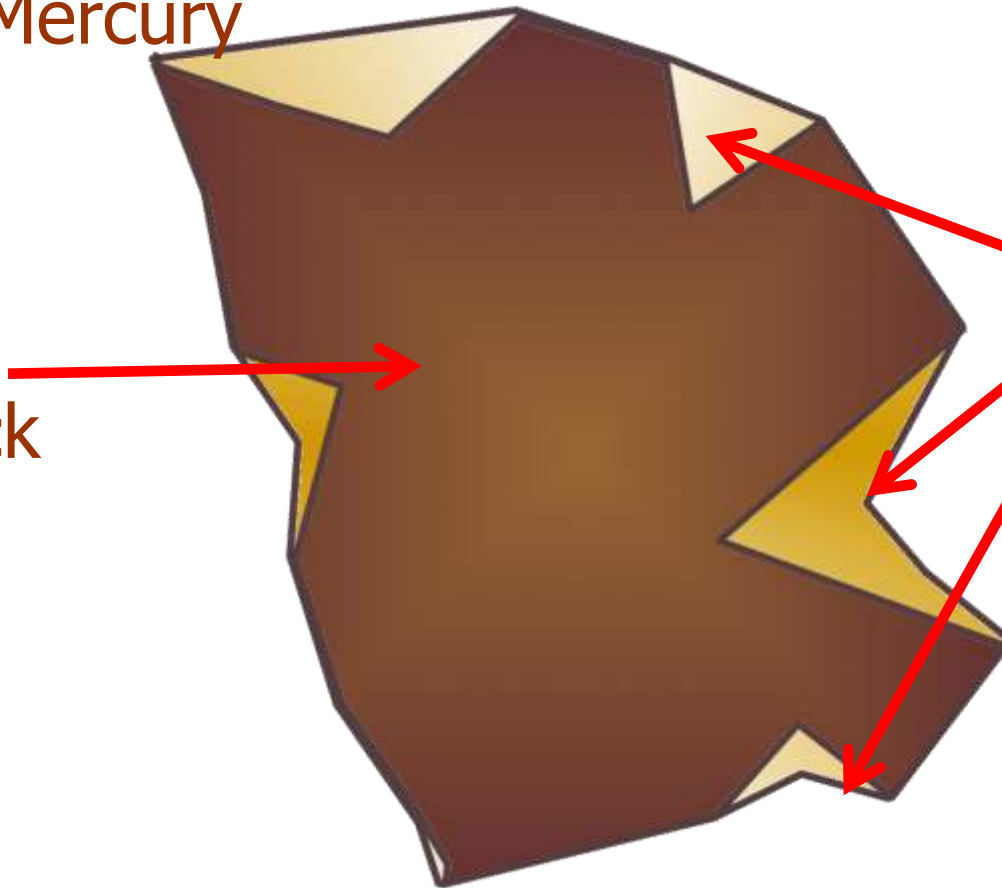




# A VERY CLOSE LOOK

**AFTER** Mercury

Sand  
or Rock



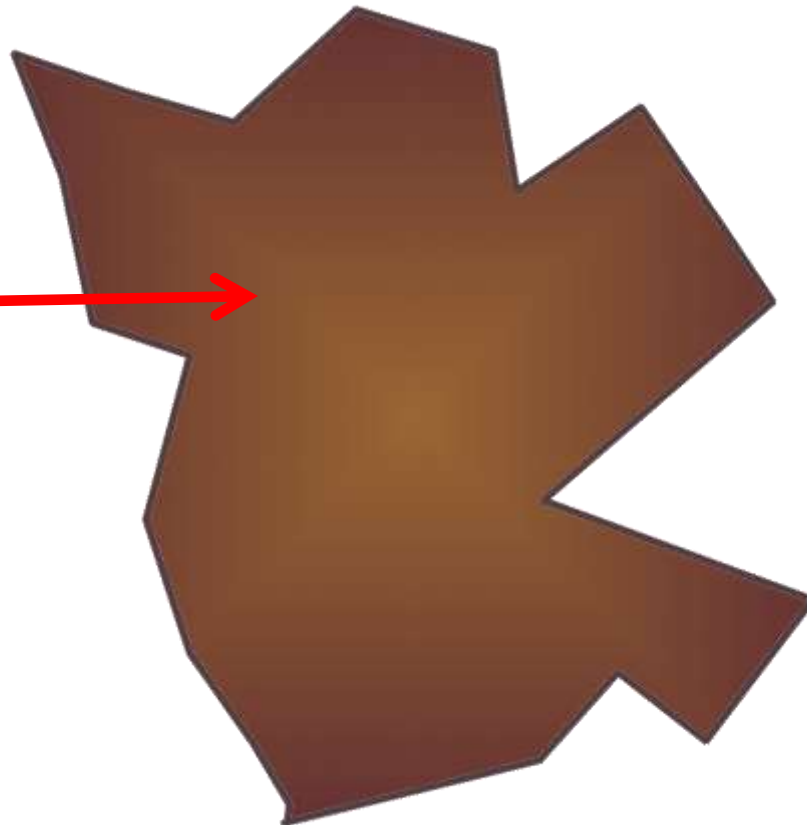
GOLD  
and  
other  
Base  
Metals



# A VERY CLOSE LOOK

AFTER the **DANCOR Process™**

Sand  
or Rock





- Extremely tolerant process
- Consistent output quality
- Bulk efficient – Various Plant Models with capacity from 10 kg to 1000 kg per shift
- Low energy consumption
- Small footprint
- Reduced production time cycle



- Reduced plant inventory lockup time
- **NO** dormant or latent plant inventory
- **NO** production or “in process” loss
- **NO** hazardous or toxic waste
- **NO** toxic fumes or gas emitted
- **NO** water, air, noise or environment pollution



- **NO** Cyanide used
- **NO** Chlorine gas used
- **NO** Potassium Cyanide used
- **NO** Solvents used
- **NO** Mercury used
- All other Base Metals recovered
- **Totally organic**





- Successfully replaces the Miller Chlorination and Wohlwill refining techniques used in LBMA Refineries Worldwide.
- Purity up to 99.999%
- Accommodates a wide variety of feed stock from as little gold content as 100.0 (10%).
  - Cathode Sludge (Wet or dry)
  - Doré Bullion
  - Granular or Atomized Doré Bullion



- Alluvial Tailings
- Zinc precipitation filtrates
- Recycled jewellers waste
- Exo- and Endogenetic deposits.
- Gold bearing ore concentrate

Technology and Laboratory Plant with capacity of 30kg per shift, currently **OPERATIONAL** in **MANICA**, Mozambique where the first ever totally **“GREEN”** Gold was refined



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# MANICA REFINERY





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2009/08/04



- The merits and intrinsic worth of the Dancor Process™ has weathered the intense scrutiny of Gold Fields, Rand Refinery, as well as Metal Process Laboratories (*South Africa*).
- All aspect including the composition of the effluent stream has been analysed, tested, verified and confirmed.





**"The epitome of superior technology and design is not when anything else can be added, but rather, when nothing else can be taken away."**



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# THE MARK OF DISTINCTION





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# THANK YOU

## See You in Chimoio

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