#### MMG - LXML Sepon

# Ozmine 2011

#### Agenda

- Type of Operation & Processes
- Uniqueness

Jason Watson Manager, Supply Chain and Site Services



# **SEPON OPERATIONS - WHERE ARE WE**



Located 40 Km North of Sepon township in Savannakhet Province, Lao PDR



# **Sepon Operations**





#### Copper

#### Sepon Copper Field attributes

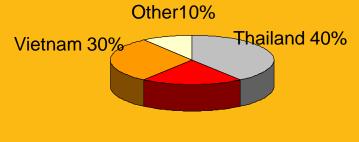
- World class high grade deposit
- Near surface
- Leachable
- Hydro power
- Long life
- Upside



#### Mining: Open Pit Processing: Whole of ore leach, SXEW Product: Grade A copper cathodes LME registration by 2011

Production: 30,000 tonnes 2005 60,000 tonnes 2006 63,000 tonnes 2007 64,000 tonnes 2008 67,500 tonnes 2009 64,200 tonnes 2010 78,000 tonnes 2011

#### **Sepon Copper Markets**



Mine Life ~ 10 years hopefully longer



China 20%

#### Oxide gold

**Commissioned 2002** 

**Expanded 2005** 

 2008 production
 93,000 oz

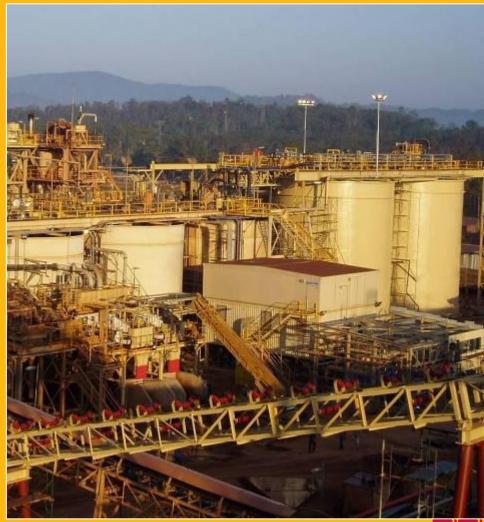
 2009 production
 105,000 oz

 2010 production
 105,000 oz

 2011 Forecast
 74,000 oz

Mine Life – less than 2 years but hopefully longer

Primary gold 2 M oz Resource target Exploration to extend resource Feasibility work being undertaken



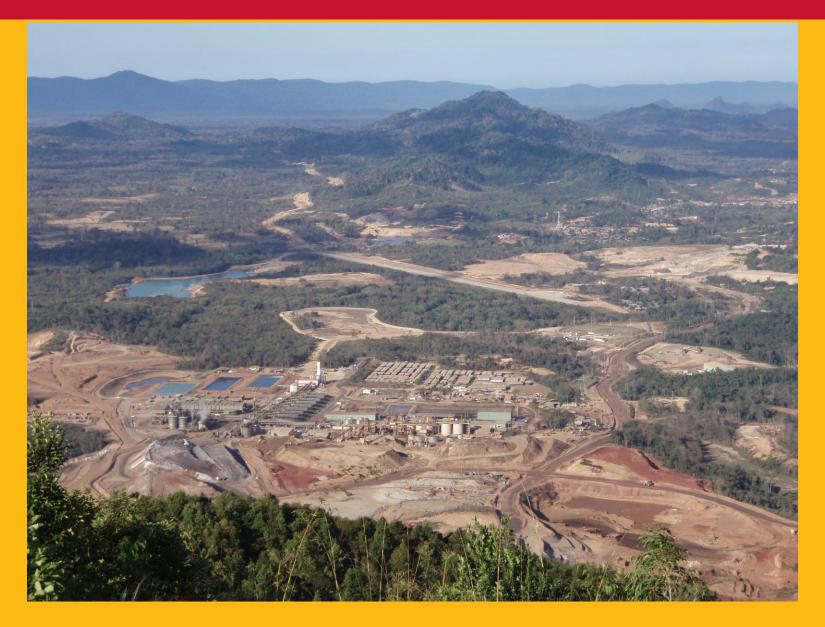


# **Sepon operations - before**





### **Sepon operations – after \$650M**





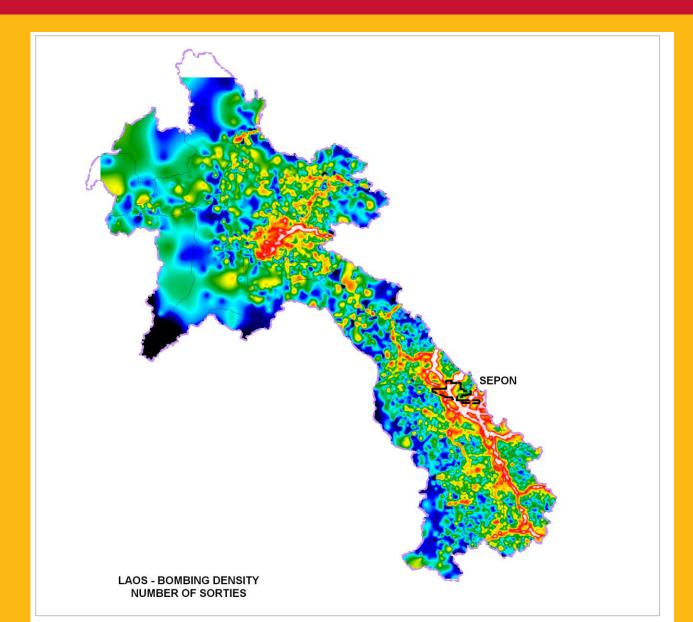
# **UXO – Unexploded Ordinance Challenges**

- Where our Operations now are; was blanket bombed
- We employ over 1000 people currently in UXO clearance activities
- Gossan ore requires the use of innovative methods and technologies to detect UXO
- Over 80,000 UXO have been detected and destroyed including 1000lb bombs



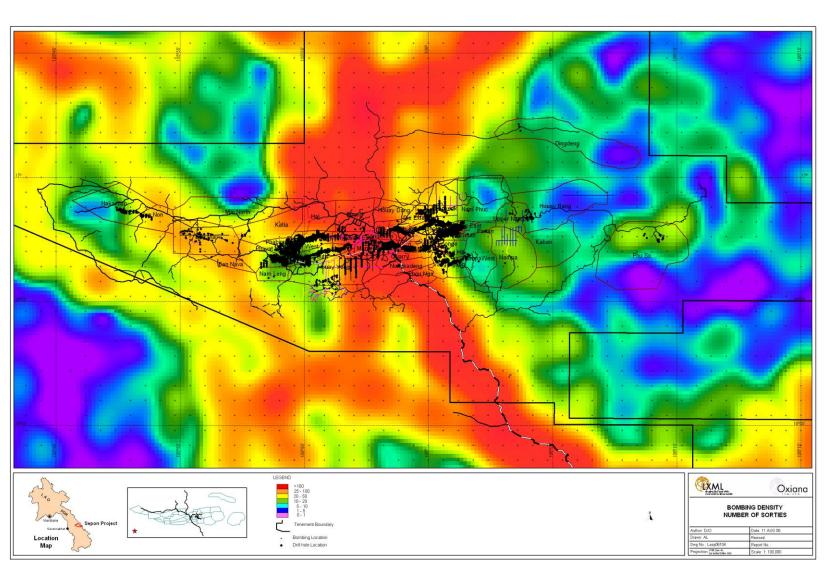


### **Bombing Density – Laos – USAF data**





### **Bombing Density – Sepon District – USAF data**



# **Mining Challenges**

- Many soft areas providing free dig creating blasting challenges
- Region is new to large scale Mining leading to extra challenges in developing Contract Partners especially when it comes to building a safety culture
- Wet conditions both floods and very slippery ground making large trucks unsuitable
- Skill of personnel





#### **Processing Challenges**

Very high grade but variable ore

 Tough to balance circuit throughout circuit
 Massive shifts in input reagents and chemicals eg: cyanide; SMBS and HCI for Gold and Sulphuric Acid

- for Copper
- Skill of Personnel; Consultants and Suppliers in the Region





# **Supply Chain Challenges**

- Infrastructure limitations often we have to provide
- Cross border restrictions
- Outgoing freight imbalance gap of 25,000 tonnes
- Challenges in developing local supplier base from explosives to clothing to food





# **Exploration Challenges – back to the Future**

- Next major project under development at Sepon is Thengkham Mining Area Development
- Good outlook for Primary Gold but we still need more
- Great past record that we believe we can continue



