Tschudi Copper Project

Maximising value-addition by producing pure refined copper for the first time in Namibia
Weatherly is a London-based resources company focused on copper in Namibia. Together with our Namibian shareholders, we produce, develop and explore; creating jobs and expertise, and maximising mining value-addition to resources in Namibia.

- **Produce**
  - Otjihase & Matchless

- **Develop**
  - Tschudi
  - Berg Aukas
  - Tsumeb West & Tsumeb Tails

- **Explore**
  - EPL132A Tschudi to Tsumeb
Tschudi

- A new open pit, heap leach, SX-EW copper project
- Peak open pit mining rate of 25 million tonnes of rock per year
- Production rate of 17,000tpa of pure refined copper cathode for initial mine life of 11 years
- Initial investment to first copper production of more than N$800 million
- 800 jobs during construction, and 500 thereafter for operations
- Construction underway, and remains on schedule for first copper production in Q2 2015
Benefits

- **Jobs**
  - 800 during construction, 500 thereafter, plus many more indirect jobs created in the Tsumeb area

- **Skills**
  - mining, processing and engineering

- **Local participation**
  - 10.8% of Weatherly is owned by Namibian shareholders, and the majority of the construction packages have been awarded to Namibian providers

- **Value-addition**
  - Downstream - producing refined copper metal for the first time
  - Upstream – utilising Namibian-produced sulphuric acid from Dundee’s Tsumeb smelter
Why a first?

- Copper is commonly produced by processing ore to make a concentrate – typically containing 20-40% copper
- The concentrate is then smelted to produce “blister copper”, at approximately 98.5% purity – as produced in Tsumeb
- This blister copper must then be refined by an electrolytic process to produce 99.99% pure copper cathode, which is then suitable feedstock for manufacturing
- This refining step is currently carried out overseas
Why a first?

- At Tschudi, we will utilise a different processing technology
  - acid heap leaching followed by solvent-extraction (SX) and electro-winning (EW)
  - produces pure refined copper cathode on site
- Acid heap leach - similar to Trekkopje (alkaline heap leach)
- SX-EW – similar to Skorpion (zinc)
- Combining these technologies for copper for the first time in Namibia
- Extensively practiced successfully elsewhere – including North and South America, Australia, Zambia / DRC, etc.
Why SX-EW for Tschudi?

- The geology of the Tschudi deposit suits acid leaching – sandstone host rock plus leachable copper minerals, yielding approximately 85% copper recovery and modest acid consumption

- Proximity of an affordable supply of sulphuric acid (Tsumeb smelter)

- Affordable and reliable power supply
Heap Leach
Upstream value-addition

- Key input to acid heap leach processing is sulphuric acid
- Dundee Precious Metals Tsumeb will be commissioning their new sulphuric acid production plant in 2015, meshing well with startup timing for Tschudi
Safety & Environmental Protection

- **Open pit mining**
  - conventional best-practice requirements during operations
  - progressive rehabilitation of waste rock stockpiles before closure

- **Heap leaching**
  - drippers not sprinklers
  - engineered and lined pad and drainage system (acid contains the product)
  - minimal acid transport (local supplier)
  - leached heap rehabilitated upon closure

- **SX-EW**
  - fundamentally a very clean process with minimal emissions
  - fluid containment and fire prevention given highest priority from design stage onwards
  - full removal and rehabilitation upon closure
Progress
Progress
Progress
Progress
Summary

➢ Tschudi is an exciting new major project, creating jobs, skills and extensive upstream- and downstream-value-addition in Namibia by producing 99.99% pure refined copper metal for the first time.
➢ The heap-leach SXEW technology is clean, reliable and proven – and developing these skills in Namibia may open up further copper mining opportunities in future.
➢ First copper production is due in Q2 2015.