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Improved recoveries and environmental outcomes from complex ores utilising EcoTechnology

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ABSTRACT

EcoTech Mining Pty Limited (EML) has developed several innovative new processes based on chlorination technology for the precious and base metals industries trademarked as the EcoGold® Process, EcoZinc® Process, EcoLead® Process, EcoCopper® Process and EcoNickel® Process.

All the EcoTechnologies are based on a first stage chlorination step at low to moderate temperature, probably in a fluid bed reactor. Subsequent unit operations are all completely conventional. EML has tested at a bench or pilot plant scale over 30 projects of varying feed stocks. These include:

- Sulphide Concentrates
- Refractory Gold Calcine Tailings
- Copper/Gold Tailings
- Bulk Polymetallic Sulphide Concentrates
- Polymetallic Sulphide/Oxide Ores, and
- Polymetallic Slag

To demonstrate the versatility of EcoTechnology, bench and pilot plant test results in five case studies are discussed:

- Wiluna Flotation Concentrate, WA – BIOX Feed
- Wiluna Calcine Facility Gold Tailings, WA
- Mt Morgan Cu/Au Tailings
- Polymetallic Sulphide Concentrates from Pegmont Deposit, Qld
- Polymetallic Sulphide/Oxide Ores from Commonwealth Mine Project, NSW, and
- Silver Spur Polymetallic Slag Heap, Qld.

Discussions with the University of Newcastle are currently underway to jointly continue R&D on EcoTechnology.