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SAMINCO PURE ELECTRIC PROPULSION SYSTEMS LAST 8 HOURS

Underground Vehicle Systems Designed to Minimize Battery Energy Consumption

Las Vegas, NV: Saminco has designed a "Pure Electric" propulsion system for underground mining vehicles that will last an entire 8 hour shift before needing a recharge. In an effort to cut costs, improve profit margins, and reduce diesel particulate matter emissions, the mining industry is moving away from diesel-powered vehicles to electric, but current technology requires recharging batteries every four hours. Saminco has found the solution.

Most underground production vehicles are diesel-powered, which produce harmful emissions and generate enormous amounts of heat that require a significant expenditure on ventilation infrastructure and electrical energy consumption. Electrically-powered vehicles are a solution, and there are many successful applications of trolley-powered and tethered vehicles.

However, mining production requires an independently powered vehicle. Existing batterypowered LHDs simply replace the diesel engine with a battery-powered inverter driving a large electric motor coupled to the existing mechanical power transmission train. The electric motor also powers the hydraulic pump. This configuration wastes precious battery energy during idling since the electric motor must operate like a diesel engine at a minimum speed to keep the hydraulic system ready. This consumption reduces battery operating time to a maximum of four hours.

Saminco, working with a LHD manufacturer, ran a successful operation for 18 months in a hard rock mine with a 1.5 yd LHD powered by a 620V / 140kWh SoNick molten salt battery, Saminco Battery Charger and a Saminco model L1000 Pure Electric traction system. This confirmed 8 hour shift endurance with battery energy to spare at the end of each shift.

To hear more in detail, please join us at our press conference on Tuesday, 27 Sept at 3 pm in Press Conference Room N245.

Saminco has been an innovator in the design and manufacture of electric propulsion drives since 1992. The company started in the coal mining industry and has expanded into hard rock mining and other applications. Saminco International offers quality built products with full service and support, with offices in the US, South Africa, Australia, China, Poland and *coming soon*, Canada.

To find out more about us, please visit www.samincoinc.com

