APEX MINING CO., INC.

PRESS INFORMATION
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INAUGURAL APEX MINING PROFESSORIAL CHAIRS STUDIES TO MANAGE TAILS, INCREASE FUEL EFFICIENCY YIELD PROMISING RESULTS

APX, 20 March 2024 —The research studies under the Apex Mining Professorial Chairs in Mining and Metallurgical Engineering have shown that mining tailings and silt are potential substitutes for cementitious materials in concrete mixes while using non-noble metals as reduction catalysts can reduce the cost of producing fuel cells.

The Apex Mining Professorial Chairs, signed in 2023, is administered through the UP Engineering Research and Development Foundation, Inc. (UPERDFI). This collaboration between UPERDFI and Apex Mining aims to help improve mining and mineral processing technologies and practices thru research.

Luis R. Sarmiento, ASEAN Eng., Apex Mining's president and CEO, lauded the awardees for their outstanding research work in their respective fields. "We are pleased with the initial outcome of the Apex Mining Professorial Chairs. The output that we can generate from the studies supported by our program will hopefully have significant impact, not only in the local mining industry, but globally as well."

Assistant Professor Karlo Leandro Baladad, awardee from the Department of Mining Engineering, submitted his group's study on utilizing mining tailings and silt as possible substitute cementitious materials for concrete mixes which can be used for construction material or for additive manufacturing applications.

Tailings, which are by-products of the extraction of valuable metals from an ore, can generate acid or trace metals that could leach and pollute water sources if not properly handled.

While Apex Mining's tailings storage facility is state of the art, it is good to find relevant uses of these tails, Sarmiento said.

On the other hand, Associate Professor Dr. Richard Espiritu, grantee from the Department of Metallurgical Engineering, presented his group's research on using

non-noble metals as oxygen reduction reaction catalysts for alkaline anion exchange membrane fuel cell.

Fuel cells require catalysts for its optimum operation, but the use of platinum-based catalyst, while exhibiting excellent performance, comes at a high cost. Lowering the assembly cost through the use of alternative catalysts can scale up the production of fuel cells — a promising technology that can help solve environmental and energy crises.

Securing clean energy sources is another priority of the company, said Sarmiento. Recently, Apex Mining inked a contract with First Gen to sourcing energy from First Gen's Mt. Apo Geothermal Power Plant in Kidapawan, Cotabato. Thus, Apex Mining is First Gen's first Directly-Connected Customer (DCC) in region 11.

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About Apex Mining: APX is a publicly listed mining company. It operates the Maco Gold Mine in Maco, Davao de Oro while its fully owned subsidiary, Itogon-Suyoc Resources, operates two mines in Benguet (Sangilo Mine in Itogon and Suyoc Mine in Mankayan). Another fully owned subsidiary, Monte Oro Resources, Inc. operates the other business interests of APX, both in the country and abroad.

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Apex Mining and UPERDFI are combining forces to generate more research work that can help the mining industry be better, safer and more responsive to the needs of its various stakeholders.

(l to r): Apex Mining's Senior Geologist Isaac Norman Rivera, with Assistant Professor Karlo Leandro Baladad, Apex Mining Professorial Chair in Mining Engineering awardee, and Associate Professor Dr. Richard Espiritu, Apex Mining Professorial Chair in Metallurgical Engineering.

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(l to r): UPERDFI Executive Director Tito Aliga, UP College of Engineering Dean Antonette Tanchuling and Apex Mining President and CEO Luis R. Sarmiento, ASEAN Eng at the launch of the Apex Mining Professorial Chairs in Mining Engineering and Metallurgical Engineering in July 2023.