From the Editor

At last the Indonesian Mining Journal (IMJ) Volume 24 Number 1 of April Edition is already published. We apologize for the delay due to several obstacles occurred such as lack of manuscripts, editing process and last but not the least the occurrence of Coronavirus disease (COVID-19) that affects the IMJ staffs also bothered the performance of the IMJ publication. The issue of the April IMJ varies that includes slope stability, seismic reflection survey, lithogeochemical exploration of gold, magnetic and induced polarization method for delineating gold-bearing vein zones, as well as potential energy and environmental impact through plasma gasification process.

Magmatic processes that occurred during the Miocene period has caused the formation of epithermal gold deposits in Cibaliung area. The gold deposit has previously been investigated through geological surveys which basically only covers the surface aspect, so in this study a subsurface analysis was carried out through magnetic and IP surveys to determine the distribution and continuity of the gold deposits. Magnetic data analysis shows that gold mineralization tends to occur at low magnetic anomaly, ranging from 37 nT to 240 nT and generally associated with northwest-oriented structures.

Indonesia has great potential for deep-seated coal resources. Shallow seismic reflection method is applicable to assist and support the deep-seated coal exploration. A study, using a shallow seismic reflection, conducted at Musi Banyuasin Regency. This study used 48 channels with 14 Hz single geophone and Mini-Sosie as an energy source. The receiver and source interval is 15 meters. This study helps the operator companies who seek a deep-seated coal about the effective and proper geophysical method for imaging deep-seated coal layer.

Halmahera hosts several gold deposits. One of them is low sulphidation epithermal (LSE) quartz veins which currently being mined is situated in Gosowong goldfield. The veins mostly originated in N-S and NNE-SSW direction. This study is aimed to determine the prospect area in the northern portion of Gosowong goldfield covering West Kao subdistrict based on surface mapping and rock/float- and BLEG stream sediment survey. Gold grade of rock/float samples is up to 0.044 ppm. BLEG data indicates calculated threshold of 10 ppb for Au and 72 ppb for Ag. A study regarding lithogeochemical exploration to delineate primary gold occurrences had been conducted at West Kao area, North Halmahera District, North Moluccas Province.

The stability of slope is an important aspect stability in an open pit mining activities. The inconsistency of the slopes will result in the collapse of rocks around the excavation site. This happens due to the condition of the rock when it has not been excavated is generally balanced. However, due to discontinuous patterns that occur other than naturally and also due to the mining activities causing a reduction in the retaining force of the rock on the slope results in the equilibrium of the force tends to shift and is not balanced. A study regarding slope stability is presented in this issue. Such a study used Pit 22 Gn Pt Kitadin Site Embalut of Kutai Kartanegara Regency, East Kalimantan Province as the object study. The results of the modeling consist of several heights, slopes, and angles.

Indonesia's coal reserve is abundant, with its lower price and widely distributed than oil and natural gas. However, it emits high carbon dioxide gas (CO_2) and sulfur compounds (H_2S, SO_x) to the environment during utilization. Plasma gasification can overcome those lacks using the external electric energy through a plasma torch. Steam as a gasifying agent should be adequate to produce H_2 and CO syngas. A research has been carried out to analyze and understand the benefit of using a different gasifying agent for maximizing H_2 production and minimizing environmental impact.

Enjoy the reading.