From the Editor

The law number 4/2009 about mineral and coal mining has just been issued, in which the mining must be carried out based on *benefit, justice and balance; national interest; participation, transparency and accountability;* and *sustainable development and friendly environment*. This reflects that this country has a new paradigm in the mining sector in terms of mining area and mining business. Moreover, the law is supposed to reinforce the nationalization spirit; to prioritize the state-owned companies to exploit the mining; to support supply of mineral and coal as the domestic industrial raw materials and energy resources; to improve internationally competitive capability; to improve revenues for community and state; to create new jobs; to ensure certain regulations on mining business. One of the important things of the above items relates to research and development aspect on the technology of improving value added for mineral and coal commodities. In other words, bulk mineral and coal cannot be exported, and they must be processed prior to trading internationally. This will create motivation and innovation for researchers to produce those commodities that can compete internationally. Import and dependence of the commodities must be significantly reduced in order to optimize the domestic mineral and coal resources and to improve the national revenues.

Papers presented in this current issue are expected to be able to answer the above statements, particularly in anticipating and resulting in competitive mineral and coal. Topic of the papers includes environmental impact, exploration, fuel for industries, economic and financial analyses.

Environmental impact of artisanal gold mining in Garut-West Java indicates that it usually utilizes mercury for its gold recovery because of effectiveness, simple and cheap process. This motivates researchers to prevent more pollution caused by uncontrolled mercury utilization. Guidance should be delivered to the miners regarding the danger of mercury substances applied in the mining operation. *Geologic and petrographic aspects were applied for coal exploration*. According to these aspects, the coals indicate similarities and differences in type and rank characteristics. These phenomena reflect the geologic setting in terms of the stratigraphic aspect and the presence of intrusive body. The phenomena could be an exploratory target for the prospective coal deposits. *Occurrence of phillipsite mineral in sub-sea floor* is discovered during the MD III-IMAGES IV Expedition from Roo-Rise-Indian Ocean. The aim of the expedition was to take inventory of the sea floor sediment samples from the Indonesian waters. The origin of the mineral in deep marine environment has been the topic of considerable discussion among scientists. Moreover, the aim of the study is to synthesize the absence of post-Palaeocene phillipsite mineral from the pelagic sediments. *Development of cyclone coal burner for fuel oil burner substitution in industries* has been conducted. The high fuel oil price forces the industries to seek cheaper alternative energy. Coal is the most promising alternative energy in this country. To cope with this situation, the researchers of *tek*MIRA have developed a cyclone burner. The burner has the combustion characteristics nearly the same as the fuel oil burner. *The economic impacts of cabotage law implementation in coal transportation* have been studied. Coal as the largest energy resource in Indonesia has contributed significant value to the state revenue. The coal transportation cost is mostly earned by foreign-flagged ships. This study shows that cabotage law implementation on coal transportation has provided positive economic impacts. *Financial analysis on the development of coal liquefaction plant in Indonesia using brown coal liquefaction technology* has been carried out by the researchers of *tek*MIRA. The increase of coal price has promoted coal companies to export this commodity rather than to allocate it as raw material for coal liquefaction. This study is aimed to conduct financial analysis of the coal liquefaction. The results indicate that this project is beneficial in diversifying the coal as alternative energy in Indonesia. *Production of bio-coal using sub-bituminous coal, wood saw dust and empty palm bunches* has been conducted at the Palimanan bio-coal plant. Sub-bituminous coal from South Kalimantan and empty palm bunches from East Kalimantan were used for the study. The results show a very satisfactory product.

The new law of the mineral and coal mining has accommodated all aspects of this sector, particularly in anticipating self sufficiency of the commodities that are imported from abroad (particularly China). This opportunity should be developed and this is challenge for the researches to prove their capabilities for the prosperous future of the country.

The Editor