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Opinion

The Politics Behind Some Mining Considerations

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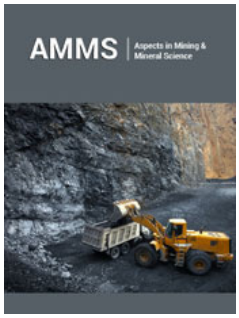

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It is interesting to look at some reasons behind the decision to develop a mine. Generally, it stands to reason that a resource deposit's economic prospect is evaluated using established geological, petrological and geochemical - analytical methods. Decisions to develop the resource are then made based on a thorough evaluation of its economic potential based on the analytical results. However, not always the decisions to mine are based purely on economical rational: Occasionally political reasons may be a determining factor in the development of an otherwise non-profitable resource. I will use coal here as one of a couple of natural 'resources' as example to show the push towards developing an uneconomic deposit. The coal considered is situated in the Galilea Basin of Queensland, Australia. Unlike the researched and established qualities of the Bowen Basin coals that have been mined in the past and mined at present, the GB (Galilea Basin) coals have not been mined, because they are uneconomical. This has been shown by research- based assessment carried out by companies over the past 20-30 years. Analyses of the G.B. coal clearly demonstrates the uneconomical prospect of these coals, using modern mining and processing technologies: The coals appear in thin bands rarely over 50cm in thickness, interbedded with silt, clay and sandstone. This translates into excessive washing of the coal, potentially having to use vast amounts of water (precious commodity) to obtain any (minute) quantities of commercially viable coal. The GB coals are within the oil window [1] and some macerals generated oil which is retained within the coal micropores and coal cleats in the form of bitumen which is the source of methane in deeper parts of the basin [2]. The bitumen is also a cause of spontaneous combustion in many coals [3].

Even though the Galilea Basin coals are clearly not a viable commercial deposit, companies still are proposing their mining without any recent analysis, totally ignoring previous research and evaluation of the GB coals. The slogan of the proposing companies advertising the prospect of mining this coal is 'providing jobs'! (Conjuring visions of a thousand miners carrying baskets of coal?). Clearly, there is no logic in the proposed venture from the economical point of view. It is merely a deceitful prospect with other than commercial motives. Modern coal mining does not need many operators (of machinery) especially in an open-cut mine. If seriously considered, the cost of washing the coal and making it marketable will outnumber any expected profit. No need to mention and calculate environmental destruction, to farmlands and waterways. However, this is not a unique problem specific to Australia. A recent article outlining a very similar case in Kenya [4] describes similar problems to the GB coal. The Kenyan coal proposed to be mined is in the Mui Basin. The Kenyan Mui Basin coal has been described as of low calorific value and of a lower quality than coals imported currently from South Africa. Furthermore, the proposed mine will pose serious environmental and social problems to the local population and the environment they live and work. Potential environmental problems resulting from the development of the GB coal have been debated and discussed extensively in the media. Another example of resource mining and exploitation that is not based on economic

factors is insitu oil and gas extraction from shales (shale oil); [5]. In the United States insitu oil extraction by 'fracking' is an ongoing, heavily government subsidized operation. The reason initially was to attain self-sufficiency of liquid fuel and independence from foreign oil suppliers. It also supplied jobs for many in areas poor in sources of income. However, the oil from shales was not stored locally as planned but exported [5]. The cost of insitu production of oil from shales in 2020-21 was at $95-100 a barrel, which was then considered an extremely high price. The present oil prices can theoretically be used to justify the production of oil from shale. However, if the environmental implications of this type of insitu extracted crude oil are to be considered they outweigh any political or economic benefits. The 'fracking' methods used to induce oil flow from a tightly consolidated rock such as shales require not just fracturing the rock but also injecting water containing various chemicals to induce flow from a solid state, since the 'oil' is retained within the pores and fine fractures of the coal in a solid form referred to as bitumen [2,3,6].

The recent idea of fracking shales proposed for the Beetaloo Basin in the Northern Territory of Australia advertised as 'Potential Boom' for the area with the usual 'buzz' words ' … generating thousands of jobs, billion dollar revenue for the NT government, rapid economic growth…' At the same conference, an exploration manager of a reputable company said that there were 'many challenges ahead of any thought of mining'. The major problem is toxic waste- water [5] which proponents of the project suggest injecting into the aquifers. Apart from the contamination of the existing ground – water, it is known from areas in the U.S. where wastewater was pushed into aquifers, earthquakes have increased in an alarming rate. The water injected into the system to release the petroleum oil that is tightly held within the rock contains an array of substances most of which are toxic to humans and animals. With continuous injection of the 'minute quantities' (as the published data tells us) of toxic chemicals are adding up. Every injection adds these chemicals to the system. It is an ongoing process that contaminates the ground water and aquifers that humans everywhere rely on. Water is a major issue worldwide as aquifers have dropped dramatically in many parts of the world (Sahara Desert, Artesian Basin Australia, Nevada, California, Atacama Desert). To deliberately poison water in this day and age is an act of madness to say the least.

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