

## KAJIAN POTENSI BAHAN GALIAN PASIR & KERAKAL DI SUNGAI BARO, KABUPATEN PIDIE, PROVINSI NANGGROE ACEH DARUSSALAM

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| <b>Author Order</b>   | 1 of 3   |
| <b>Accreditation</b>  |  |
| <b>Abstract</b>       | <p>The necessity of sand gravel in the development is become larger along with the advance of economic and population growth. Baro river has big enough natural resources in the form of excavated materials such as sand and gravel. Because of that reason, the stock taking of sand and gravel materials is needed in Baro river to serve as reference for the Government about the potential of owned excavated materials. Study about the potential of excavated minerals in Baro river is done in the form of research such as surface geological mapping, geoelectric survey, test pit, measurements of potential spacious and volume, as well as economic analysis. From the above researches, the informations obtained are about the potential area of the minerals, the quality of sand &amp; gravel materials through the laboratory test, and the economical feasibility. In the research location, there are found excavated materials in the form of sand &amp; gravel with the potential area and volume that can be mined appropriated with the government regulation is about 2.997.319,15 m<sup>2</sup>. The volume of excavated materials is about 14.986.595 m<sup>3</sup> with the depth of 5 meters. The result of laboratory test, the grain size is dominated by gravel and sand with the percentage of gravel is about 28,41% up to 66.53%, the percentage of sand is about 33.21% to 71,44%, and the percentage of silt and clay about 0.10% to 0.48%. According to loss angeles abrasion test, the maximum value is 43.70% and minimum value is 38,53%. As well as the results of soundness test, the maximum value is 0,239%, making the aggregate is very resistant to weathering process. In the economical analysis, the result of the NPV &gt; 0, BCR &gt; 1, and IRR &gt; MARR with the value about 7.5%, so that mean the location is recommended for mined economically.</p> |
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