

**GEOSEA 2018**

**15<sup>th</sup> REGIONAL CONGRESS ON GEOLOGY,  
MINERAL AND ENERGY RESOURCES  
OF SOUTHEAST ASIA**

16-17 October 2018



**ASEAN** Geosciences and Earth resources  
for sustainable development

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# Application of 3D image in the determination of an appropriate powder factor and the most favourable blasting direction under the consideration of rock mass properties

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Blasting always plays a significant role in the mining industry, especially in open pit mines because it has a direct effect on the following stages, including loading, hauling and crushing stages. Powder factor and blasting direction, two of the factors contributing to ensure the proper fragmentation, depend on rock mass properties consisting of rock types, joint density and the inclination and strike of rock layers. In which, joint density, the dip and orientation of the layers have been requested for investigation at the field, which encounters more difficult in the blocky rock mass. Therefore, the paper proposes how to collect and analyse the elements by employing 3D image in solving of a proper powder factor and a favourable blasting direction.

**Keywords:** *Rock mass properties, 3D image, powder, blasting direction.*

**PUBLISHING HOUSE FOR SCIENCE AND TECHNOLOGY**

A16, 18 Hoang Quoc Viet Road, Cau Giay, Ha Noi  
Marketing & Distribution Department: **024.22149040**;  
Editorial Department: **024.37917148**

Administration Support Department: **024.22149041**

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## **PROCEEDINGS**

**15<sup>TH</sup> REGIONAL CONGRESS ON GEOLOGY, MINERAL AND  
ENERGY RESOURCES OF SOUTHEAST ASIA**

### **THEME**

**ASEAN GEOSCIENCES AND EARTH RESOURCES  
FOR SUSTAINABLE DEVELOPMENT**

*Responsible for Publishing:*

*Director, Editor in Chief*

**TRAN VAN SAC**

*Editor:* **Dinh Nhu Quang, Nguyen Thi Chien**

*Computing Technique:* **Nguyen Thi Bich Thuy, Ho Thi Thu**

*Cover design:* **Nguyen Thi Bich Thuy, Ho Thi Thu, Pham Thai Ha**

*Corporate publishing: General Department of Geology and Minerals of Vietnam  
Address: No. 6 Pham Ngu Lao, Hoan Kiem, Hanoi*

**ISBN: 978-604-913-751-8**

Printing 1000 copies, size 19 × 26.5 cm, printed at Hoang Quoc Viet Technology and Science Joint Stock Company. Address: No.18 Hoang Quoc Viet, Cau Giay, Hanoi.

Registered number for Publication: 3551-2018/CXBIPH/01-43/KHTNVN.

Decision number for Publication: 41/QĐ-KHTNCN was issued on October 5<sup>th</sup>, 2018.

Printing and copyright deposit were completed in 4<sup>th</sup> quarter, 2018.



# HA NOI - GEOSEA 2018

ISBN: 978-604-913-751-8



9 786049 137518

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