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CONTENT

Oral Presentation pp. 1-254

Poster Presentation pp. 255-495

Page

PLENARY SESSION

1. **Do Canh Duong, Tran Van Tri, Nguyen Van Nguyen, Nguyen Thanh Van, Nguyen Dac Dong, Dao Thai Bac, Hoang Van Long, Tran Van Mien.** Overview of Mineral resource potential in Vietnam..... 1
2. **Clive Burrett, Athaithip Thassanapak, Mongkol Udchachon.** Mainland SE Asian terranes - re-evaluation of tectonic models based on new evidence from fieldwork, zircon dating and palaeontology 6
3. **Izokh A. E, Tran Trong Hoa.** Magmatism and metallogeny of large igneous provinces of Asia 7
4. **Yasuhito Osanai, Nobuhiko Nakano, Masaaki Owada, Pham Binh, Tran Van Tri, Punya Charusiri, Tran Ngoc Nam.** Tectonic evolution of extreme metamorphic rocks in the Trans Vietnam Orogenic Belt, SE-Asia 9
5. **Michel Faure, Van Vuong Nguyen, Luong Thi Thu Hoai, Claude Lepvrier, Lin Wei.** Early Paleozoic or Early-Middle Triassic collision between the South China and Indochina Blocks: the controversy resolved? Structural insights from the Kon Tum massif (Central Vietnam) 10
6. **Manuel Pubellier, Matthias Delescluse, Sung-Ping Chang, Nicolas Chamot-Rooke.** The Eas Sea; What have we learned on crustal extension? 12
7. **Hoang Ngoc Dang, Trinh Xuan Cuong, Phan Tien Vien, Nguyen Thanh Tung, Tran Van Tri.** Overview of Tertiary sedimentary basins and their hydrocarbon portential in Vietnam..... 16
8. **Khin Zaw, Charles Makoudi, Hai Thanh Tran.** Metallogenic significance of sediment-hosted/orogenic gold deposits in Mainland Southeast Asia..... 19

75. **Satria Bijaksana, Abd Hamdan, Darharta Dahrin, Aiyen Tjoa.** Ni Phytomining: Prospects and Challenges in Indonesia.....372
76. **Ahmad Fauzan Yusoff, Jasmi Hafiz Abdul Aziz, Zaidi Harun.** Mineralogy and geochemistry of iron-copper in Mengapur project, Sri Jaya, Pahang, Peninsular Malaysia.....373
77. **Heri Hermiyanto Zajuli, Hermes Panggabean, Fajar Shodiq.** Mineralogy and Rock-Eval characteristic of Mesozoic fine grained sedimentary rock from Pedawan Formation: Implication for shale hydrocarbon potential 374
78. **Nguyen Phuong, Nguyen Quoc Dinh, Tran Van Quy, Nguyen Thi Thu Hang, Va Thi Lan Anh.** Establishing criteria for calculating ore reserves and assessing the economic value of Na Tum Pb-Zn mine in Bac Kan with the recovery of useful accessory elements.....375
79. **Nguyen Anh Tuan, Le Thi Hai, Pham Van Viet.** Determining for an output capacity of dimension stone exploitation from the computer simulations to generate the fracture network in 3D 376
80. **Pham Van Viet, Pirat Jaroonpattanapong, Bui Xuan Nam, Pham Van Hoa, Nguyen Dinh An.** 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 377
81. **Kyaw Linn Zaw, Thet Paing Kyaw Win.** Discoveries of orogenic gold mineralization at Kalein area, Shwegyin township, Bago region, Myanmar.....378
82. **Nguyen Quoc Hung.** The technical, technological and environmental solutions for mining and processing of iron ore at Thach Khe - Ha Tinh.....379
83. **Le Xuan Truong, Tran Thanh Hai, Khin Zaw.** Geology and origin of Pac Lang Au-W deposit, Bac Kan province, Northeastern Vietnam.....380
84. **Dietmar Alber.** Up to Date Processing of soft and hard Industrial Minerals 381
85. **Pham Van Huong, Mai Kim Vinh, Do Ngoc Chuan, Dang Van Roi, Nguyen Thi Thu Thuy.** Gold mineralization characteristics in Da Mi area, Ham Thuan Bac district, Binh Thuan province.....382

ENERGY RESOURCES AND DEVELOPMENT

86. **Nita Apriyani.** Breaking chain lock of Sangatta CBM potential through new paradigm shift.....387

Determining for an output capacity of dimension stone exploitation from the computer simulations to generate the fracture network in 3D

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In dimension stone quarry exploitations such as the marble quarry, a literature review of the existing numerical modelling techniques has been carried out. According to Distinct Element Method (DEM), discontinuities have been treated as boundary conditions between blocks and, consequently, an accurate knowledge of joint distribution and orientation was required. The result of analytical data and simulating in the fracture rock environment, which is applied to a mining condition of the dimensional stone quarries. The research we introduce in the output capacity of the dimension stone quarry from the computer simulations to generate the fracture network in 3D with an aim of evaluating the size of the blocks. The results of numerical models have been used to optimize some of the technical parameters for dimensional stone extraction and ensuring stable bench in the mining operation.

Keywords: Discontinuities, modelling, DEM, dimension stone quarry.

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