

International Conference on Earth Science and Technology 2012

Procedia Earth and Planetary Science Volume 6

**Bandung, Indonesia
18 – 19 September 2012**

Editors:

K. Matsui

ISBN: 978-1-62748-790-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© by Elsevier B.V.
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact Elsevier B.V.
at the address below.

Elsevier B.V.
Radarweg 29
Amsterdam 1043 NX
The Netherlands

Phone: +31 20 485 3911
Fax: +31 20 485 2457

<http://www.elsevierpublishingsolutions.com/contact.asp>

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com



Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia Earth and Planetary Science 6 (2013) iii–v

Procedia
Earth and Planetary Science

International Symposium on Earth Science and Technology 2012	1
Review of the Mineral Development in Indonesia	
S. Kramadibrata	6
Rock Magnetic Methods in Soil and Environmental Studies: Fundamentals and Case Studies	
S. Bijaksana, E. Huliselan, L.O. Safiuddin, D. Fitriani, G. Tamuntuan, E. Agustine	8
Research of CO ₂ Storage Possibilities to the Underground	
P. Stáša, K. Chovancová, V. Kebo, J. Chovanec, O. Kodym	14
Ore Blending as Mine Scheduling Strategy to Accommodate Resources Conservation at Pakal Nickel Mine, PT ANTAM (Persero) Tbk	
T.S. Prasojo, A. Yulianto, A. Hindarto, B. Parinussa, A. Arifien	24
Geochemical Characteristics of Host Rocks of Polymetallic Epithermal Quartz Veins at Soripesa Prospect Area, Sumbawa Island, Indonesia	
W. Khant, I.W. Warmada, A. Idrus, L.D. Setijadji, K. Watanabe	30
Occurrence of Long-Chain <i>n</i> -Alkanes in MuaraWahau Coal, Upper Kutai Basin, Indonesia	
B. Rahmad, K. Anggayana, S. Notosiswoyo, S. Widodo, A.H. Widayat	38
Database Management and Quality Assurance is Key of Success in Exploration	
H. Setyadi, K. Anggayana	42
Origin of Magnetite and Ilmenite-Series Granitic Rocks in Sulawesi, Indonesia: Magma Genesis and Regional Metallogenetic Constraint	
A. Maulana, K. Watanabe, A. Imai, K. Yonezu	50
Geochemistry of Volcanic Rocks at Zhaokalong Iron-Copper-Polymetallic Ore Deposit, Qinghai Province, China: Implications for the Tectonic Background	
H. Li, K. Watanabe, X.-s. Xi, K. Yonezu	58
Integrated Exploration Method to Determine Cu Prospect in Seweden District, Blitar, East Java	
A.Y. Al Hakim, B. Sulistijo	64
Underground Geological Database Management System for Mapping Process Improvement, Case Study of Deep Ore Zone (DOZ) Mine, PT Freeport Indonesia	
H. Setyadi, L. Widodo, H. Setiono, L. Soebardi	70
Stable Isotope and Geochemical Observations in the Kago Low-Sulfidation Au/Ag Deposit, Southern Kyushu, Japan	
T. Tindell, K. Watanabe, A. Imai, R. Takahashi, A.J. Boyce	77
Conceptual Model of Hydrothermal System at Kotamobagu Geothermal Field, North Sulawesi, Indonesia	
H. Riogilang, R. Itoi, S. Taguchi	83
Organic Matter Characteristics of the Kiliran and Ombilin Oil Shales, Indonesia	
A. Widayat, K. Anggayana, Syafrizal, M.N. Heriawan, A.H. Hede, A.Y. Al Hakim	91
Ore Mineralogy and Formation Condition of Epithermal Gold–Silver Deposits in the Southwestern Hokkaido, Japan	
E.T. Yuningsih, H. Matsueda, N. Fukuchi	97
Chemical Forms of Arsenic and Selenium Leached from Mudstones	
T. Igarashi, R. Sasaki, C.B. Tabelin	105
Landsat Thermal Infrared based Monitoring of Heat Losses from Kuju Fumaroles Area in Japan	
Md. B. Mia, Y. Fujimitsu	114
Laboratory Experiment of Tracer Test with Vertical Two-Dimensional Porous Media	
T. Maruo, RyuichiItoi, T. Tanaka, M. Iwasaki, H. Oishi	121
The Geology, Mineral Resources of Sierra Leone and How the Resources can be Used to Develop the Nation	
A.B. Jalloh, K. Sasaki, M.O. Thomas, Y. Jalloh	131
2-D Subsurface Imaging Techniques for Deep Ore Mineral Mapping Using Geoelectrical and Induced Polarization (IP) Methods	
S.D. Irawan, P. Sumintadireja, A. Saepuloh	139
Mass Balance from Gravity in the Takigami Geothermal Reservoir, Oita Prefecture, Japan	
D. Oka, Y. Fujimitsu, J. Nishijima, Y. Fukuda, M. Taniguchi	145
Paleoenvironmental Interpretation based on Lithotype and Macerals Variation from Ritan's Lignite, Upper Kutai Basin, East Kalimantan	
M. Dwiantoro, S. Notosiswoyo, K. Anggayana, A.H. Widayat	155
Estimation of Subsurface Structure in the Western Fukuoka City from Gravity Data	
T. Arima, Y. Fujimitsu, J. Nishijima	163
Development of Water Management Modeling by Using GIS in Chirchik River Basin, Uzbekistan	
H. Pachri, Y. Mitani, H. Ikemi, I. Djamaruddin, A. Morita	169
Integration of Geothermal Exploration Data and Numerical Simulation Data using GIS in a Hot Spring Area	
S. Higuchi, J. Nishijima, Y. Fujimitsu	177
Estimation of Natural Recharge and Groundwater Build up in the Bandung Groundwater Basin Contributed from Rain Water Infiltration and Inter-aquifer Transfer	
L.E. Widodo	187

The Conceptual Method of Crosswell Seismic Reflection for Underground Coal Mine Planning in Indonesia A.D. Kusumo, B. Sulistijo, S. Notosiswoyo	195
Major Element and Rare Earth Elements Investigation of Merapi Volcano, Central Java, Indonesia T. Wulaningsih, H. Humaida, A. Harijoko, K. Watanabe	202
Statistical Analysis of Mercury Data from Soil Survey in Non-Volcanic Geothermal System: A Case Study in Sulawesi Suryantini	212
An Evaluation Study on CCS System against Geological Uncertainty and Troubles H. Suzuki, K. Sasaki, Y. Sugai	219
Deep Sea Mining of Submarine Hydrothermal Deposits and Its Possible Environmental Impact in Manus Basin, Papua New Guinea K. Gena	226
Hydrochemical Study of Groundwater in Sidoarjo Mud Volcano Area, East Java Indonesia E. Purwaningsih, S. Notosiswoyo	234
Comparison of Arsenic Adsorption on Lignite, Bentonite, Shale and Iron Sand from Indonesia K.K. Mar, D. Karnawati, Sarto, D.P.E. Putra, T. Igarashi, C.B. Tabelin	242
Study on Co-placement of Coal Combustion Ash-Coal Waste Rock for Minimizing Acid Mine Drainage Generation: A Preliminary Result of Field Column Test Experiment G.J. Kusuma, H. Shimada, C. Nugraha, A. Hamanaka, T. Sasaoka, K. Matsui, R.S. Gautama, B. Sulistianto	251
Type and Origin of Springs and Hotsprings at Surrounding Ridges of Bandung Basin, Related with its Potential Natural Contamination I. Iskandar, S. Notosiswoyo, C. Purnadi, T. Pasaribu	262
Phytoremediation—An Eco-Friendly and Sustainable Method of Heavy Metal Removal from Closed Mine Environments in Papua New Guinea S. Rungwa, G. Arpa, H. Sakulas, A. Harakuwe, D. Timi	269
Comparative Assessment of Potential Ground Uplift Induced by Injection of CO ₂ into Ainoura, and Berea Sandstone Formations A. Arsyad, Y. Mitani, T. Babadagli	278
Influence of Variation Dosage of Chemical Reagents in the Turbidity of Overflow from Sedimentation Process at Dewatering Plant of PT Freeport Indonesia I. Butarbutar, D. Varianemil, E. Sanwani	287
Relation between the Velocity Profile at the Free End and Fracture Information of Rock Sample S. Kubota, T. Saburi, Y. Ogata, Y. Wada, G.M. Simangunsong	295
The Contribution of Low Rank Coal Liquefaction in Indonesian Economy in 2025 U.W. Soelistijo, A.P. Wibowo, M. Abdullah	301
Application of Highwall Mining System to Recover Residual Coal in End-Walls H. Shimada, Y. Chen, A. Hamanaka, T. Sasaoka, H. Shimada, K. Matsui	311
Backfilling Strategy at Gag Island, PT Gag Nickel, Subsidiary of PT ANTAM (Persero) Tbk F.E. Prihasto, S. Suseno, Y.A. Susanto, D.N. Rusiana, Sugiyono	319
Preliminary Study of In-Situ Combustion in Heavy Oil Field in the North of Thailand M. Chaipornkaew, K. Wongrattapitak, W. Chantarataneewat, T. Boontaeng, S.T. Opdal, K. Maneeintr	326
Quantitative Evaluation of Characteristics of RORO shipping Service by Use of a Modal Choice Model Comparing Toll Expressway and Railway Transportation K. Shiota, T. Sumi, Y. Oeda, M. Syahminan	335
Numerical Analysis of Interaction Effects in Double Extra-Thick Coal Seams Mining N. Lin, T. Sasaoka, H. Shimada, A. Hamanaka, K. Matsui	343
Application of Linear Programming in Determining the Composition of Inland and Offshore Mining Production of Pt Timah (Persero), tbk A. P. Wibowo, F. A. Rosyid, F. R. Baskoro	350
Rock Mechanic Application for Future Heavy Oil Development, Shallower Reservoir and Highly Faulted Area: A Geomechanical Model for Central Sumatra Oil Field F. Adlan	364
Integrated Site Investigation Method to Analyze Subsurface Condition for the Belt Conveyor B. Sulistijo, A.S.K. Anwar	369
Removal of Hg and Pb in Aqueous Solution Using Coal Fly Ash Adsorbent E.P. Kuncoro, M.Z. Fahmi	377
Liquefaction Due to the 2006 Yogyakarta Earthquake: Field Occurrence and Geotechnical Analysis D. Sarah, E. Soebowo	383
Using the Schmidt Hammer on Rock Mass Characteristic in Sedimentary Rock at Tutupan Coal Mine S. Saptono, S. Kramadibrata, B. Sulistianto	390
Studies on Surrounding Soil during Construction Using the Deep Pipe Jacking Method in the Deep Strata T. Senda, Y. Maeda, H. Shimada, T. Sasaoka, K. Matsui	396
Finding the Relationship between RQD and Fracture Frequency in the Different Ok Tedolithologies B. Vali, G. Arpa	403
Probabilistic Analysis of Physical Models Slope Failure M.A. Azizi, S. Kramadibrata, R.K. Wattimena, I.D. Sidi	411
Fundamental Study on Support Systemat Cibaliung Underground Gold Mine, Indonesia Purwanto et al.	419

Rockburst Prediction of a Cut and Fill Mine by Using Energy Balance and Induced Stress B. Sirait, R.K. Wattimena, N.P. Widodo	426
Recovery of Platinum from Spent Reforming Catalyst by Acid Leaching and Coprecipitation C. Masuda, K. Yonezu, K. Watanabe, T. Yokoyama	435
Production of 5-hydroxymethyl Furfural from Sugarcane Bagasse under Hot Compressed Water D.A. Iryani, S. Kumagai, M. Nonaka, K. Sasaki, T. Hirajima	441
In-Situ Measurement of Mercury Transport in the Sea Water of Minamata Bay S. Yano et al.	448
Precipitation of Nickel Hydroxide from Simulated and Atmospheric-Leach Solution of Nickel Laterite Ore M.Z. Mubarok, J. Lieberto	457
Land Capability Evaluation of Reclamation Area in Indonesia Coal Mining using LCLP Software S. Maryati.	465
Stability Analysis of Paste Fill as Stopes Wall Using Analytical Method and Numerical Modeling in The Kencana Underground Gold Mining With Long Hole Stopes Method R. Karim, G.M. Simangunsong, B. Sulistianto, A. Lopulalan	474
Monitoring and Balance of Gas Flow in Underground Gas Storage R. Danel, L. Otte, V. Vancura, M. Řepka	485