SHORT COURSE ON APPLIED MINING GEOSTATISTICS: RESOURCES ESTIMATION AND SIMULATION

Venue: The Luxton Bandung
Class I: June 18 – 20, 2012
Class II: December 17 – 19, 2012

Facilitator

The principal facilitator: Mohamad Nur Heriawan has educational background on Bachelor of Engineering in Mining Engineering (ITB, 1998), Master of Engineering in Applied Geophysics (ITB, 2000), Postgraduate Diploma in Mine Geostatistics (Ecole des Mines de Paris, France, 2003), and Doctor of Philosophy in Geostatistics and Geomodeling (Kumamoto University, Japan, 2007). At present he is Associate Professor at Department of Mining Engineering, Faculty of Mining and Petroleum Engineering of ITB. He is a member of International Association for Mathematical Geosciences (IAMG), Association of Indonesian Mining Professionals (PERHAPI), and Indonesian Association of Geologists (IAGI). He has more than 13 years of experience in research and teaching on mineral exploration and more than 9 years of experience in geostatistical analysis and geomodeling. He taught geostatistics courses for PT. INCO, PT. Aneka Tambang, PT. Freeport Indonesia, PT. Arutmin Indonesia, PT. Bukit Asam, PT. East Asia Minerals Indonesia and some public courses. He published more than 25 papers related to the application of geostatistics both in national and international proceedings and journals.

Contact Persons

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Registration Form

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Please fill in the form below for registration:
Please fax this registration form with copy of payment form to the contact persons. This registration form can be copied and distributed.

Organized by:
Lembaga Afiliasi Penelitian dan Industri
Institut Teknologi Bandung
Jl. Sumur Bandung No. 5 Bandung 40132
Introduction

Since introduced by D. Krige (1955) and G. Matheron (1960), geostatistics have been widely used in mining industry for resources and reserves estimation.

Geostatistical analysis provides a powerful tool for enhancing the prediction and decision making capabilities of mine planners and geologists. The experimental variogram provides the only measure of whether a deposit, or part of a deposit, is best analyzed using geostatistical methods or whether classical statistics would suffice. Geostatistics provides the best possible weighting for samples used in reserves estimation so as to produce the lowest possible error of estimation.

The conventional reserves estimation methods give reasonably good predictions of the in situ tonnage, but they are not accurate enough for predicting grade or quality variables on a short term basis, nor do they give any estimate of how accurate their predictions are.

This short course will share the application and practical aspect of geostatistics in mining essentially spatial characterization, estimation, and simulation of resources quality such as coal properties, laterite nickel, base metal, precious metal, and alluvial deposits.

Objectives

The objectives of this course are:

1. To give understanding about the principle of geostatistical methods in mining application and its superiority over conventional reserves estimation methods.
2. To give knowledge about the rule of thumb on variogram construction and fitting model as the variogram modelling is the most critical part in geostatistical estimation.
3. To give the application and practical skills on statistical data analysis, variogram modeling, resources estimation, simulation and classification based on geostatistical method.

Who Should Attend

Mine engineers, petroleum engineers, geophysicists, geologist, geosciences, and everybody or professional who want better understanding and to broaden the knowledge from the course subjects.

Topics and Schedule

The course will be taught for 3 days (24 hours) with detail topics as below:

Day 1
1. Why geostatistics? 2 hours
2. Review on conventional reserves estimation methods 2 hours
3. Practical rule on variogram modelling and application 4 hours

Day 2
1. Practicing on statistical analysis 2 hours
2. Practicing on variogram construction and fitting model 4 hours
3. Principle and application of kriging method for resources estimation 2 hours

Day 3
1. Drillhole spacing optimization and resource classification based on geostatistical method 2 hours
2. Introduction to multivariate geostatistics and geostatistical simulation 2 hours
3. Practicing on resources estimation, simulation and classification 4 hours

Facilities and Others

Participants are required to bring their own notebook computer for exercising and practicing. They will be provided with geostatistical public domain software named SGeMS (Stanford Geostatistical Earth Modeling Software). Participants will also get course’s hand out, certificate, seminar kit, lunch and coffee break.

Registration Fee

The registration fee is Rp. 6,000,000.00 per participant (excludes VAT and accommodation). Payment is required with registration and should be fully paid and transferred to:

Lembaga Afiliasi Penelitian dan Industri Account No.: Institut Teknologi Bandung 0028680879 – LAPI ITB Pelatihan Jl. Sumur Bandung No. 5 Bandung BNI Cabang ITB, Jl. Tamansari 80 Bandung

*Registration and payment made before June 1, 2012 for Class I and December 1, 2012 for Class II will be discounted Rp. 500,000.00
*Requirement for the minimum number of participant in each class is 8 (eight) persons.