

**JONATHAN STEEDMAN, MAusIMM**  
**Economic Geologist**

**BACKGROUND**

Jonathan Steedman is a Mineral Resource Geologist with Micon International Limited. He has operating experience in copper mining in central Africa where he was the site geologist and, subsequently, provided mine planning consulting services. He is fully familiar with a number of commercial mine design and scheduling software packages relating to borehole databases, geostatistics, block modeling, open pit optimization, mine design and scheduling, and has provided training courses in the use of such software in Europe, the Middle East, Africa, Australia, and Asia.

Prior to joining Micon, Mr. Steedman worked as an independent geological consultant when he provided services in mine planning and scheduling for limestone cement projects for Rheinkalk in Germany, and detailed resource modeling work on the Mikhailovsky iron ore mine in southern Russia.

**ASSIGNMENT EXPERIENCE**

**August 2005 – Present: Micon International Co Ltd**

Provided technical consulting services to clients across the world, with involvement in feasibility studies, technical due diligence work, mineral reserve audits and competent persons reports. Carried out and been involved in a number of professional assignments including:

- Inter-Citic Minerals: Reporting of mineral reserves for the Dachang gold deposit in China as part of the NI 43-101 Technical Report, including open pit optimisation, sensitivity analysis, mine design and production scheduling.
- Jerooyaltyn: Reporting of mineral reserves for the Jerooy gold project in Kyrgyzstan as part of the feasibility study, including open pit optimisation, mine design and production scheduling
- Vanessa Ventures: Open pit optimisation, mine design and scheduling on the Los Crucitas gold project, Costa Rica, for the project feasibility study prepared for the company
- Polyus Gold Corp: Competent Person's Report on all assets for listing on the London Stock Exchange. Site visit covering all aspects of geology and resources on seven gold deposits across two regions in eastern Russia.

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- Arctic Platinum: Reporting of mineral resources and mineral reserves for the Suhanko PGE deposit in Finland as part of the feasibility study, including resource estimation, open pit optimisation, mine design and production scheduling.
- MMC Norilsk Nickel: Audit review of mineral reserves of the Norilsk Nickel (Polar Division) on behalf of the company.
- Minco PLC: Mineral Resource block modelling and production scheduling of the Orca, La Laguna silver-mercury deposit, Mexico, for the project feasibility study prepared for the company.
- Polyus Gold Corp: Mineral resource estimation for the Nezhdaninskoe gold deposit for the project feasibility study prepared for the company.
- British Canadian Mines: Review of the geology and mineral resources of the Little Deer copper project in Newfoundland, Canada.
- Indo Egyptian Fertiliser Company: Mineral resource and open-pit reserve estimation for sedimentary phosphate ores in the Nile Valley, Egypt.
- Renaissance Capital: Technical due diligence on the North Katpur and Karoiba Tungsten Projects, Kazakhstan, on behalf of the company.
- Altynor Gold Corp: Open pit optimisation and sensitivity analysis on the Yubileynoe gold project in Kazakhstan.
- Polyus Gold Corp: Audit review of mineral reserves for the Olimpiada, Blagodatnoe and Titimukhta gold mines in Russia on behalf of the company.
- Kalvinit Oy: Mineral resource block modelling and open pit optimisation on the Kairi and Kouvu ilmenite projects in Finland on behalf of the company.
- Reservoir Capital: NI 43-101 Technical Report on the exploration potential of the SEE Brestovac-Zlot property in Serbia.
- Ararat Gold Recovery Company: Review of mineral resource estimation at the Zod gold mine, Armenia.

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### **PREVIOUS EXPERIENCE**

#### **January 2005 – August 2005: Independent Geological Consultant**

Independent consultant providing technical services in mine design, scheduling and mining software to clients. Involved the use of Surpac Vision and MineSched software packages. Professional assignments included:

- Micon International: Technical support in drillhole database creation and mineral resource block modelling using Surpac software.
- SST Consultants: Technical support on assignment to Rheinkalk in Germany for production scheduling using MineSched scheduling software.
- IMC Consultants: Mineral resource block modelling for the Mikhailovsky iron-ore mine in southern Russia.

#### **April 2004 – December 2004: Surpac Minex Group**

Position involved providing software training, technical support and sales to mine sites and mining companies throughout the world, in the regions of Europe, Middle East and North Africa, Australia, New Zealand and Asia. Became fully conversant with borehole databases, geostatistics, block-model resource models, pit optimisation and mine design and scheduling in Surpac Vision, MineSched and other third party software products. Assignments included:

- Gold Mines of Algeria: Creation of a drillhole database for exploration and blasthole drilling on the Tirek gold deposit in southern Algeria.
- Iluka Resources: Technical support in mine scheduling using MineSched software on several mineral sands deposits in Western Australia.
- Société le Nickel: Training and technical support in mine scheduling using MineSched software on several nickel deposits in New Caledonia.

#### **May 2001 – March 2004: First Quantum Minerals Ltd.**

As site geologist was responsible for on-site control of mining from mine inception in 2001, gaining experience in mining and mine planning, grade control, ore stockpiling and transporting, fleet management, blasting and management and administration. Also responsible for the training of local geologists in grade control and geological sampling and liaising with analysts and mine financiers on site visits. Created life-of-mine schedules and a two-year detailed mining

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and production plan for the Lonshi open pit using MineSched scheduling software, and a system for tracking production from the pit and from each machine to produce daily and weekly reports.

Exploration experience was gained from the planning and field supervision of on-site reserve-expansion soil sampling and drilling programmes, as well as control of grass-roots soil sampling and preliminary drilling programmes elsewhere in the DRC. Involved use of Surpac, Interdex, MapInfo and ER Viewer exploration software.

**EDUCATION**

**2000-2001 University of Leicester**                      **M.Sc. Mineral Exploration**

Achieved Pass with Merit

**Modules Included:**    Ore Deposit Modelling                      Mineral Economics  
                                 Mining and Mineral Processing                      Ore Mineralogy  
                                 Sampling and Evaluation                                      Geostatistics

**1996-1999 University of Aberdeen**                      **B.Sc. Geology**

**PROFESSIONAL AFFILIATIONS**

Member of the Australasian Institute of Mining and Metallurgy (AusIMM), Number 227377