# Martha Villalba Matamoros Consultant

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- in Martha E Villalba



### **CAREER OVERVIEW**

Martha joined Whittle Consulting in August 2020 as a Consultant. Based in Montreal, Canada, Martha has worked in mining operations, consulting and academia for almost 2 decades. She is experienced in strategic mine planning optimisation, geostatistics, resource and reserve estimation and simulation, mining process reconciliation, haulage system optimisation and mine CAPEX/OPEX estimation.

Martha holds a PhD in Mining Engineering from McGill University. Martha conducts mine optimisation projects, provides in-house mine planning technical advice, consultant support and life-of-mine design/ scheduling work for Whittle Consulting clients, for both open pit and underground mining projects and operations. Trilingual, Martha is fluent in Spanish, English and French.

### **QUALIFICATIONS**

- PhD in Mining Engineering, McGill University, Montreal, Canada.
- Master of Engineering (Mining Engineering), McGill University, Montreal, Canada.
- Master of Science (Mining Engineering), University of Alberta, Edmonton, Canada.
- Citation in Applied Geostatistics, University of Alberta, Edmonton, Canada.
- Bachelor of Science (Mining Engineering), UNSAAC, Peru.

#### **MEMBERSHIPS**

- Member of Quebec Engineer Association (OIQ) as CIP (candidate à l'accès à profession)
- Member of the Society of Mining, Metallurgy & Exploration (SME)
- Member of Canadian Institute of Mining (CIM)

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## **CAREER HIGHLIGHTS**

Whilst studying for a PhD and Masters in Mining Engineering at McGill University, Martha developed a deep understanding of the formulation of optimisation algorithms. While studying for a MSc in Mining Engineering at University of Alberta. Martha mastered her knowledge of geostatistical techniques.

As a Senior Mine Engineer for DRA Global Limited, Martha undertook strategic mine planning based on optimisation algorithms in multiple iron deposits and hauling systems optimisation into mine production schedule evaluation in iron deposits in the USA, due diligence on feasibility studies of iron deposits in Canada and optimisation technical assistance in gold deposits of Serbia and Senegal.

Whilst studying at McGill University, in the Mineral Economics, Mine Reliability and Asset Management Laboratory, Martha formulated an underground mine stope layout stochastic optimisation with dilution management.

In the COSMO Stochastic Mine Planning Laboratory at McGill University, Martha developed a robust short-term mine production scheduling optimization model. This formulation simultaneously optimizes fleet allocation and mining sequence, while accounting for hauling systems, operational considerations and uncertainty in both orebody and also fleet parameters.

Whilst studying for a MSc in Mining Engineering at University of Alberta in the Centre for Computational Geostatistics Laboratory, Martha proposed a simulation to quantify for the uncertainty in the global mean for improving geostatistical modelling.

As a Mine Engineer, Martha's experience in mining operations includes strategic mine planning, mining reconciliation, reserve and resource evaluation, and project evaluations in assets of BHP, Glencore and Century Mining.

Martha has published five peer-reviewed research papers related to mine planning optimisation in open pit and underground operations.