



proEXPLO 2023

**COURSE**

# FUNDAMENTALS OF MINERAL RESOURCE ESTIMATION



**SAT 6<sup>TH</sup> AND SUN 7<sup>TH</sup> MAY 2023**

**FROM 9:00 TO 16:00 HOURS**

**IIMP VENUE**

## Abstract

SLR and ProExplo2023 will present the popular course at PDAC on Fundamentals of Resource Estimation. This course, presented by a team of experienced SLR professionals, introduces the fundamentals of Mineral Resource estimation following the CIM Mineral Resource and Mineral Reserve Best Practice Guidelines. The content has been prepared for an audience of exploration and mining geologists as they are primarily responsible for the discovery, definition and production of mineral deposits. The purpose of this course is to outline the key components and considerations of importance in mineral resource estimation so that the audience can incorporate what they have learned into their work.

The course begins with drilling databases and progresses to cover resource domains, exploratory data analysis, trend analysis, estimation techniques, cut-off grade calculation, classification criteria and Mineral Resource statement. Specific considerations for the mineral resource model will be explored, including practical aspects such as the proposed mining method and equipment, as well as geostatistical aspects such as criteria in the proper selection of domains. SLR will explain the basics and importance of each step, and mention common risks and mistakes.

Exercises that complement the course content may include: database verification and validation, geological interpretation, outlier treatment, cut-off grade calculation, exploratory data analysis, block grade estimation, search ellipses strategies, classification, block model verification and Mineral Resource statement following the Canadian NI 43-101 standard.

## Instructors

**Benjamin Sanfugo** is a Principal Geologist at SLR. With more than 26 years of experience. Focused on resource estimation, grade control, reconciliation and assurance of best practices in various types of deposits, mainly HSE and LSE epithermal, base metals, porphyry copper, among others, and at different levels of development, from acquisition, PFS, FS, production and closure plan. His expertise includes identifying and prioritizing reserve replacement and extending the LOM, metallurgical characterization, supervising and standardizing sampling processes, reconciliation and mining limits. In his career, he has developed high-performing multidisciplinary and multicultural teams. Prior to joining SLR, Benjamin held the position of Resources and Reserves Manager at Barrick Gold Corporation.

Benjamin is an experienced Vulcan user and an advanced user of Leapfrog and Supervisor. Provides long-term estimates and due diligence to support publications, mergers and acquisitions. He has developed and trained on QAQC, reconciliation, mineral resource estimation and best practices.

**Benjamin SANFUGO**



Benjamin obtained his degree in Geology from the University of Chile. Citation in Applied Geostatistic; University of Alberta, Canada. Diploma in Geostatistical Evaluation of Deposits; Universidad de Chile. Diploma in Mining Business Management; Adolfo Ibañez University. Chile.

Benjamin has professional certification in mineral resources License# 0068, July 2010, from "Comisión Chilena Calificadora de Competencias en Recursos y Reservas Mineras".

**Rosmery Cárdenas** is a Geology Technical Manager and Principal Geologist at SLR, with 20 years of experience in the mining industry, including exploration, development and production activities in underground and open-pit operations in a wide variety of geological environments in several countries. Prior to working as a consultant, Rosmery was a Resource Geologist at Barrick Gold Corporation.

Rosmery has been involved in numerous projects, including due diligence and independent engineering reviews, evaluation of mining projects for bank financing, mergers and acquisitions, prepared drilling programs, geostatistical studies, Mineral Resource estimates and audits, and documentation for public disclosure. Rosmery is an experienced user of Vulcan, Leapfrog, Supervisor, GSLIB and Phinar's X10-Geo software. In addition to her technical skills, Rosmery's experience includes project management, technical consulting and leadership within SLR's geology group.

Rosmery studied Geological Engineering at the National Engineering University and has a graduate certificate in Geostatistics from the

**Rosmery CARDENAS**



University of Alberta. She has provided training in Mineral Resource estimation to mining companies and has been a presenter of short courses at PDAC. She was a presenter at the 2020 Modeling and Resource Estimation Best Practices Roundtable in Toronto. In addition, Rosmery co-presented the short course The Basics of Mining Disclosure Securities Laws - NI 43-101 and S-K 1300 at proEXPLO 2021. Rosmery is an active member of the Mining Committee of the Peruvian Canadian Chamber of Commerce located in Toronto and is a member of the Technical Committee of ProExplo2023.

**Sean Horan** is the Technical Director of Geology and Principal Geologist for SLR. He draws on his operational experience in diamond mining in Angola and underground gold mining in Ontario, Canada, as well as on the many exploration projects and mining operations he has visited as a consultant to provide technical advice to his clients.

Sean has experience in the application and review of advanced linear and non-linear modeling techniques for complex deposits and for many different commodity types and styles of mineralization. Within the SLR geology group, he provides technical leadership and mentoring to a strong team of resource geologists. He is an expert in Seequent's Leapfrog and Datamine software and develops custom geostatistical utilities in Visual Basic and Python. He has taught several training courses in mineral resource estimation internationally, both in

**Sean HORAN**



English and Spanish. Sean has undergraduate and honors degrees in Geology from Rhodes University in South Africa, and a graduate certificate in geostatistics from the University of Alberta.

## Costs

CATEGORIES	RATES US\$ INC. IGV	
	Until 16.03.2023	From 17.03.2023
Non-Associates	600	650
Associates	500	550
Students	250	300
Teachers	300	350

- The IIMP Active Member must be up to date with their 2023 dues.
- The student and the teacher must present their respective university transcripts.
- \* Includes digital certificate.