



**CSA Global**  
Mining Industry Consultants  
an ERM Group company



TRAINING OUTLINE

# PRINCIPLES OF STRUCTURAL DATA COLLECTION AND CONTROLS

This one-day course will teach participants how to improve their structural data collection and assist them in gaining a working knowledge of how structural data can be analysed to allow a better understanding of structural controls on mineralisation.

# CSA GLOBAL TRAINING COURSE

Routine collection of quality structural data is frequently overlooked or undervalued in our industry at present; the lack of quality data can often lead to poor interpretations, ineffective targeting, and unnecessary additional costs.

Exploration, mining and database geologists face several challenges in maximising the value of their structural data sets. These include what type of structural information should be collected, how much, and how to assess the quality of data collected from drill core.

This course teaches participants how to improve their structural data collection, recognise and manage quality control issues in oriented drill core and demonstrates how structural data can be analysed to allow a better understanding of structural controls on mineralisation. The course ensures the structural data you are collecting is useful to all stakeholders in the life of mine value chain.

CSA Global is proud to deliver this one-day training course.

## WHO SHOULD ATTEND?

This one-day course is designed for all exploration, mining, database and underground geologists, or geotechnical engineers who are seeking to improve their structural data collection and assist them to gain a working knowledge of how structural data can be analysed to allow better understanding of structural controls on mineralisation.

## DELIVERY MODE

All courses are delivered by CSA Global in our West Perth office or at premises of your choosing (single client bookings only).

This course is presented as a full one-day program.

The benefits of studying in a classroom setting include being able to share first-hand experiences, ideas and questions with peers and your expert facilitator.

You'll study alongside like-minded people from industry and help to strengthen your network.

## LEARNING OUTCOMES

Upon completion of this course, you will have a solid grounding in the following:

1. Spot how to quickly assess the quality of structural data collected from drill core;
2. Learn methods of applying core orientation confidence;
3. Identify problem data in the database for filtering during analysis and/or interpretation;
4. Understand how planar and linear data is plotted on a stereographic net;
5. Learn how to examine populations of planar structures;
6. Recognise what can be achieved with effective analysis of structural data;
7. Extract meaningful geometric outcomes from analysis of structural data;
8. Learn different methods of sub-dividing data;
9. Discover how to recognise important patterns within data sets;
10. Learn approaches to extracting value from both individual oriented drill holes or extensive oriented drill hole datasets.

## WHAT SKILLS WILL I GAIN UPON COMPLETION?

Participants will have gained the following upon completion of the course:

- How to undertake QAQC on data from oriented drill core.
- Be able to sub-divide and analyse data using spatial, geometric and categorical methods.
- Understand how to categorise structures based on simple characteristics during logging.
- Organise data in a queryable way.
- How to spatially sub-divide data in QGIS.
- Be better able to decide what is the most appropriate data to collect from your core.

# AGENDA ● ● ● ●

## Course Program

8.30	Introduction
8.50	<b>PRESENTATION:</b> Plotting planar and linear data on the stereographic net
9.10	<b>EXERCISE:</b> Plotting planar and linear data on the stereographic net
9.50	<b>PRESENTATION:</b> Data Quality Control
10.20	Break
10.40	Exercise: Data Quality Control
11.20	<b>PRESENTATION:</b> Structural observation and data organisation
12.20	Lunch
12.50	<b>PRESENTATION:</b> Analysis of structural data
13:30	<b>EXERCISE:</b> Spatial domaining and analysis of structural data
14:30	Break
14:50	<b>PRESENTATION:</b> Methods of integrating structural data
15:30	<b>EXERCISE:</b> Integrating data to improve mineral systems understanding
16:30	Summary and wrap up

## OUR FACILITATORS

Our facilitators are experienced practitioners with a robust mix of academic and practical expertise.



### DR. STEVE BODON

PhD (Geol), MSc (Geol), BSc (Geol),  
SACNASP Pr.Sci.Nat.

Steve is an exploration and structural geologist with more than 25 years experience in minerals exploration..

His area of expertise include geodynamic evolution and genesis

of mineral deposits, structural geology and controls on mineralisation, exploration geochemistry, ore characterisation whilst taking an integrated geoscience approach to target and project generation across multiple commodities and ore deposit classes. Steve is Principal Consultant in exploration with CSA Global.



### DR. ROB HOLM

Ph.D. Earth Science, P.G.Dip.  
Engineering Geology, B.Sc. Hons.  
Geology, MAIG

Rob is an expert geologist with an extensive and diverse background in the minerals as well as oil and gas sectors.

He specialises in structural geology, drawing on experience ranging from Archean gold systems to recent and actively forming analogues across the Southwest Pacific, to investigate mineral systems across multiple spatial and temporal scales. Rob has extensive experience in geoscience education and training, and is currently a Senior Consultant with CSA Global.

## PRACTICAL EXERCISES

Our facilitator will demonstrate:

- Basics of stereographic projection of structural data and the key analysis types and patterns.
- Quality control of oriented drill core data.
- Categorisation and organisation of structures in data collection templates.
- Analysis of structural data sets using spatial and categorical methods.

## WHAT'S INCLUDED?

- Certificate of Attendance (on request)
- Course notes with ample space to make your own notes
- Face to face facilitator-led training
- Post course support (1 hour)
- Morning tea, lunch, and afternoon tea (optional)
- Practical exercises comprising of:
  - Various sample datasets for you to explore!
  - Spatial data capture exercise using QGIS
  - Leapfrog project and viewer files

## WHAT DO I REQUIRE?

Your laptop with Windows 7 or higher, Microsoft Excel, QGIS 3.2 or higher, Leapfrog 2021 (1 week trial licence provided) and Leapfrog Viewer, Georient, including internet connection.

## WHAT DO I LEAVE THE COURSE WITH?

- Data collection template (Excel)
- Structural Data Logging Classification Guide

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## COST

**\$550.00 + GST per person (Australia)**  
**\$565.00 Excluding Tax (Canada)**

Classes are limited to eight people, to ensure individual attention is available where needed.

Single client bookings can be arranged for larger classes if requested.

## TIME

8:30 AM – 5:00 PM

## DATES

Dates available on the CSA Global website:  
[csaglobal.com](http://csaglobal.com)

## HOW DO I REGISTER?

Email [marketing@csaglobal.com](mailto:marketing@csaglobal.com) or register online.

SEATS ARE LIMITED  
REGISTER NOW!





[csaglobal.com](http://csaglobal.com)

