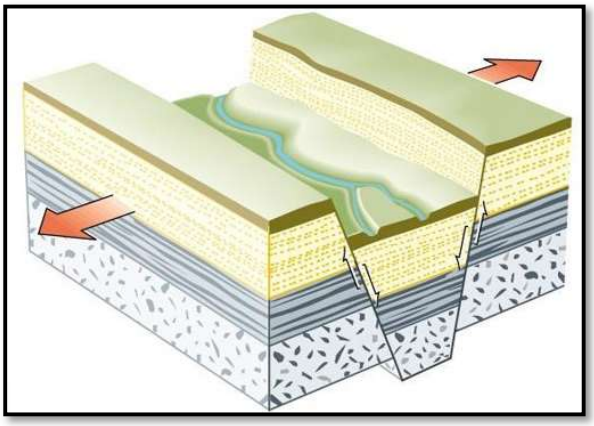
magalgeo Consulting

Advanced Course :: Structural Styles

General architecture of distensional, compressional and transcurrent systems.

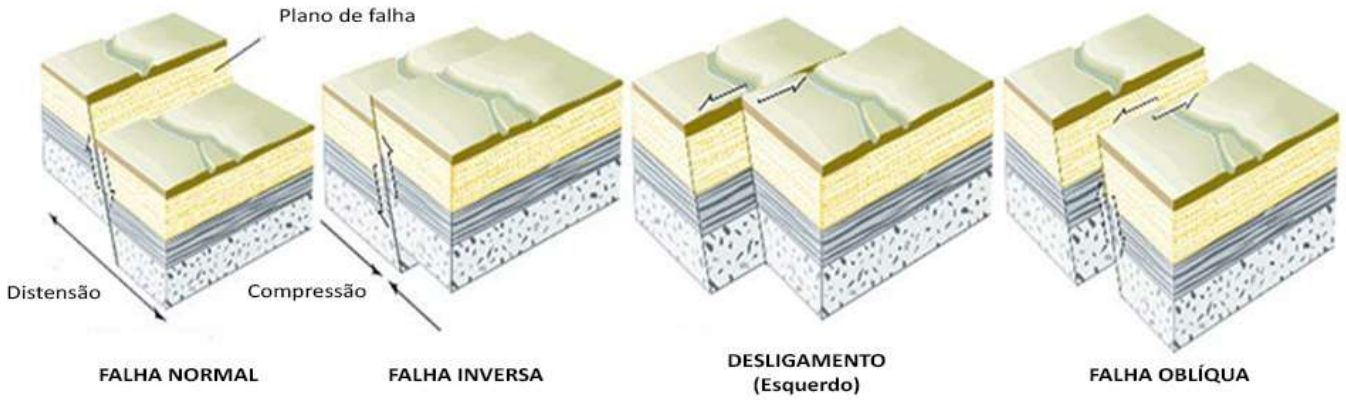
This course provides the participants with an overview of the geometry of individual fabric elements and the overall architecture of extensional, contractional, and strike-slip systems. The course starts with a review of basic concepts in structural geology and tectonics, explores structures and processes of the various systems, and concludes with a discussion of the role of tectonic inheritance. Images, maps and cross-sections of tectonic features from several parts of the world illustrate it.



COURSE TYPE: LIVE STREAMING (05 DAYS, 40 HOURS)
CLASSES IN PREPARATION
COST: € 1500

Why is structural geology so important??

Those who work in mineral exploration and mining development deal with two fundamental attributes of mineral deposits, namely, their composition and geometry. In most cases, tectonic structures control the geometry of oil & gas accumulations and ore bodies or represent the very expression of a given fabric element. Knowing the geometric and genetic aspects of individual structures and their associations in the scenario of the various tectonic systems is thus of fundamental importance.



Structural styles.

Objectives

- Reviewing basic concepts of structural geology and tectonics
- Discussing in detail the geometric and kinematic aspects of individual structures and their associations in the extensional, contractional, and strike-slip systems

- Exploring the geophysical and remote sensing imaging of tectonic structures
- Discussing the role of tectonic inheritance during the development of tectonic systems.

Content

- Rocks under stress and the generation of tectonic structures;
- The lithosphere and the deformation regimes;
- Tectonic systems;
- Extensional systems:
    1. fabric elements and their associations;
    2. kinematic and dynamic aspects of rifts;
    3. structural styles;
    4. architecture of the associated sedimentary accumulations.
- Contractional systems:
    1. fabric elements and their associations;
    2. kinematic and dynamic aspects thrust wedges;
    3. structural styles;
    4. architecture of the associated sedimentary basins.
- Strike-slip systems:
    1. fabric elements and their associations;
    2. kinematic and dynamic aspects of keirogens;
    3. structural styles;
    4. architecture of the associated sedimentary basins
- Reactivation and inversion in the tectonic systems.

Who should attend

Geologists, geophysicists, and engineers working in the exploration and production of oil & gas and other natural resources.

Instructor

- **Humberto** Reis, PhD