

GEOP 501

Reflection Seismology

1. Review of the Seismic Method (4 weeks)

- Introduction
- Seismic waves
- T-X curves
- Seismic velocity
- Seismic events
- 2-D seismic exploration
- 3-D seismic exploration
- Seismic data processing
- Seismic data interpretation

2. Borehole Seismology (3 weeks)

- Introduction
- Uphole survey
- Check shot survey
- Vertical seismic profiling
- Acoustic well logging
- Crosshole survey

3. Designing 3-D Land Seismic Surveys (3 weeks)

- Introduction
- Controlling factors
- Survey parameters
- Aspect ratio
- Field layouts
- Swath shooting method

4. Amplitude Variation with Offset (AVO) (3 weeks)

- Introduction
- Zoeppritz' Equations
- RPP
- Shuey's AVO Approximation
- Empirical Relations
- Processing AVO Data
- Analyzing AVO Data
- Applications

5. TBA (*By: Industry professionals*) (2 weeks)

- (TBA)