

Geology & Geophysics in Industry

2 Day AGENDA

Day 1

Welcome/Introduction	8:30
Lecture 1 – Focus of Industry	8:50
Exercise 1 – Considerations	9:25
Lecture 2 – Basics of Prospecting	9:40
Break	10:05
Exercise 2 – Feasibility	10:15
Lecture 3 – Types of Data	10:35
Exercise 3 – Play Adequacy	11:00
Lecture 4 – Well Log Data	11:15
Exercise 4 – Well Log Correlation	11:40
LUNCH	12:00
Lecture 5 – The Seismic Method	1:00
Exercise 5a – An Inclined Reflector	1:15
Exercise 5b – Imaging an Anticline	1:30
Lecture 6 – Seismic Reflections	1:55
Exercise 6a – Calculating Reflection Coefficients	2:20
Break	2:40
Exercise 6b – Calculating Frequency & Wavelength	2:50
Exercise 6c – Modeling a Seismic Trace	3:00
Lecture 9 – Seismic Resolution	3:30
Exercise 9a – Calculating Vertical Resolution	3:45
Lecture 9 – Seismic Resolution (continued)	4:00
Exercise 9b – Calculating Lateral Resolution	4:15
Lecture 7 - Overview of Seismic Interpretation	4:40
ADJOURN	5:00

AGENDA

Day 2

Lecture 8 - Structural Analysis	8:30
Exercise 8 Introduction	9:10
Exercise 8 part 1 - Jump Correlation of Fault V	9:15
Exercise 8 part 2 - Tying Fault V with Inlines	9:30
Exercise 8 part 3 - The Orientation of Fault V	9:45
Break	10:00
Exercise 8 part 4 - Using Time Slices	10:10
Lecture 10 – Stratigraphic Analysis (part 1)	10:30
Exercise 10a – Interpreting Seismic Sequences	11:15
LUNCH	12:00
Lecture 10 – Stratigraphic Analysis (part 2)	1:00
Exercise 10b – Interpreting Depositional Environments	1:30
Lecture 11 – Data Analysis	1:50
Exercise 11 - Burial History	2:40
Break	3:10
Lecture 12 – Prospect Analysis (part 1)	3:20
Exercise 12 – Estimating Volumes of Oil	3:40
Lecture 12 – Prospect Analysis (part 2)	4:15
ADJOURN	5:00

The above short course agenda was developed for geology and geophysics students that have not had much exposure to how geoscience is applied in industry. It can be tailored for undergraduate juniors and seniors or graduate students. The agenda can be modified to meet specific needs and time constraints. Contact the visiting geoscientist Fred Schroeder at fred.w.schroeder@exxonmobil.com to discuss options.