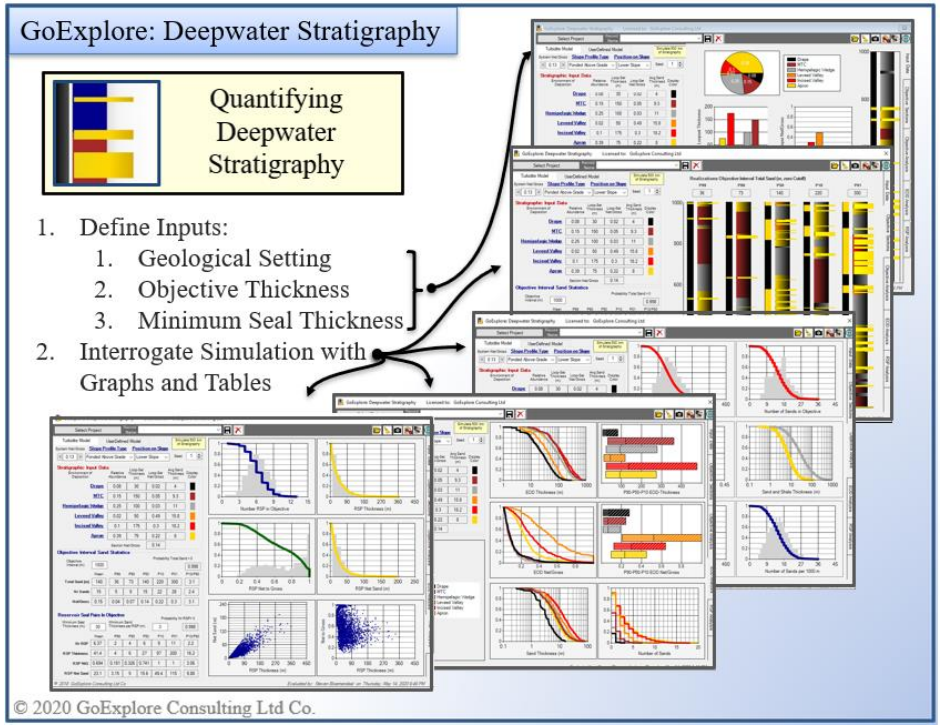
GoExplore Consulting
Free Friday Webinars
Quantification Deepwater Systems
with Deepwater Stratigraphy Tool
May 22nd 9am Houston Time

Agenda

- Introduction to Deepwater Sedimentary Systems
  - Play Fairway Analysis
  - Reservoir Risk and Uncertainty Quantification
- Slope Systems Characterization & Calibration
- GoExplore: Deepwater Stratigraphy
- Demo
- Wrap-up



Download at: www.goexplore.consulting

From Play to Quantitative Prospect Prediction

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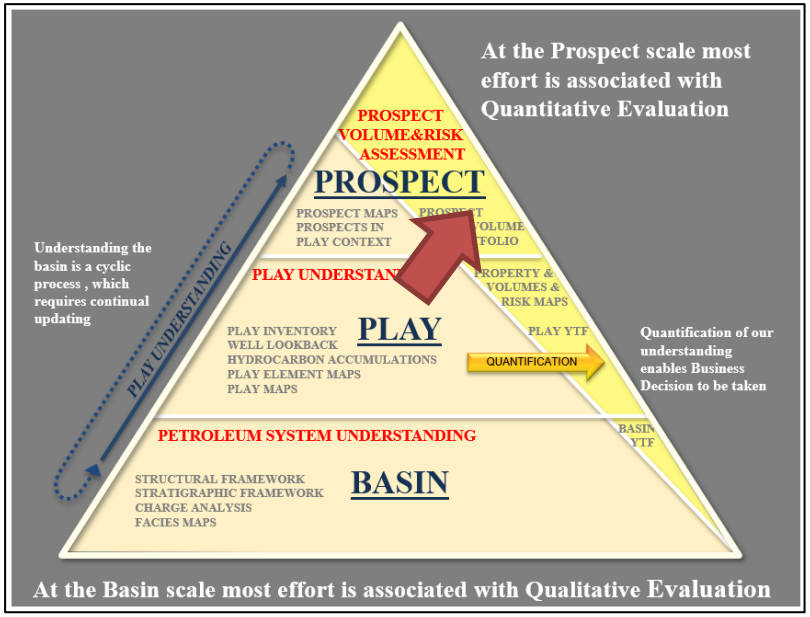
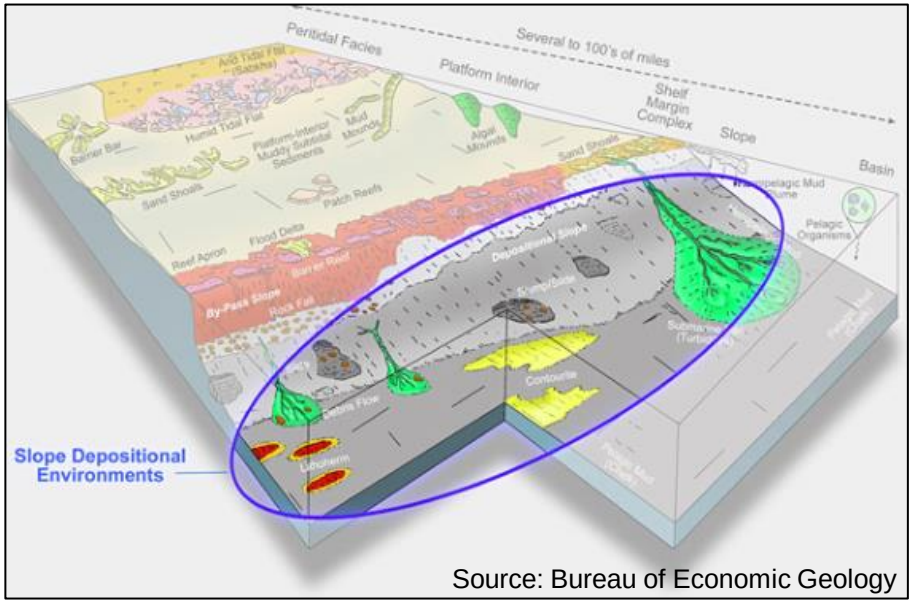
How to translate **Play Observations** into **Quantitative Prospect Predictions**





PFA Integration: Reservoir Risk Quantification

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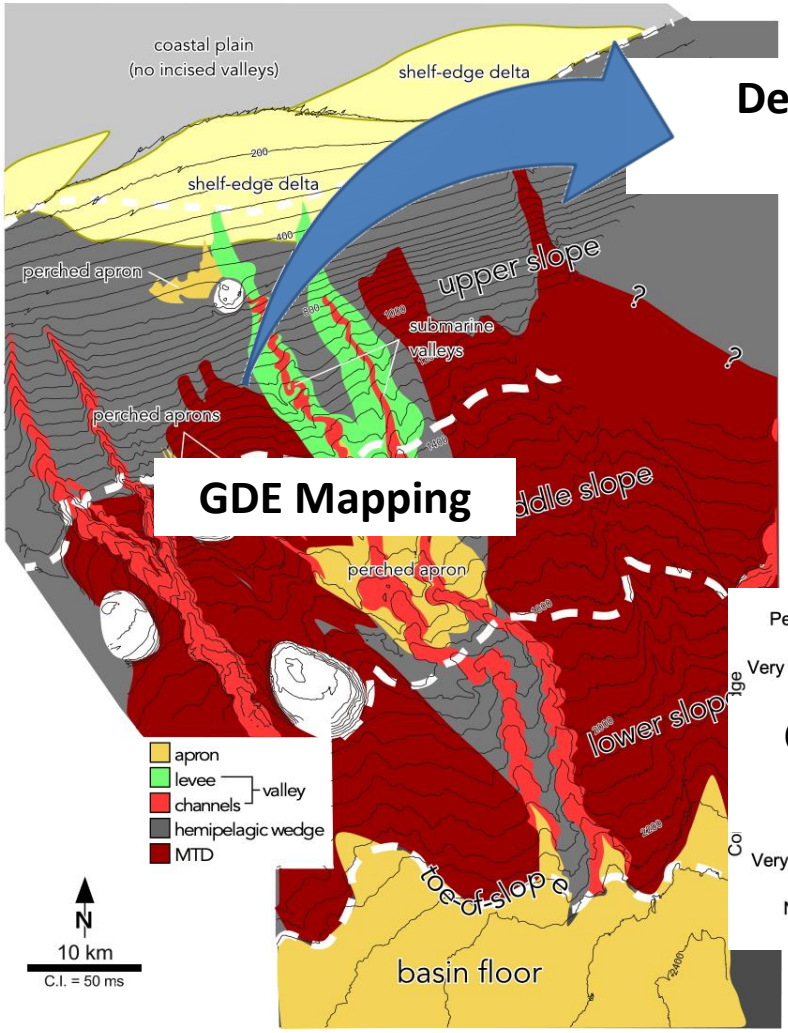
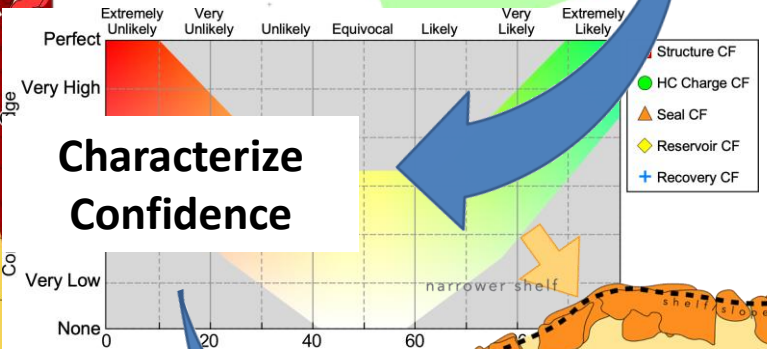


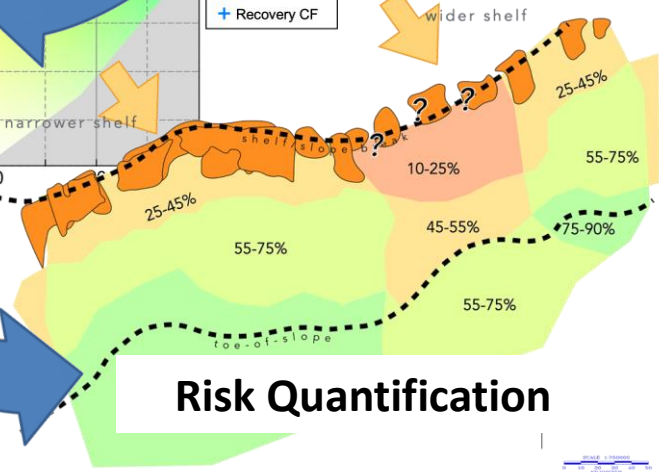
GDE Mapping

Depositional Process Understanding

Qualification of Risk



Characterize Confidence



Risk Quantification

PFA Integration: Reservoir Prediction & Uncertainty

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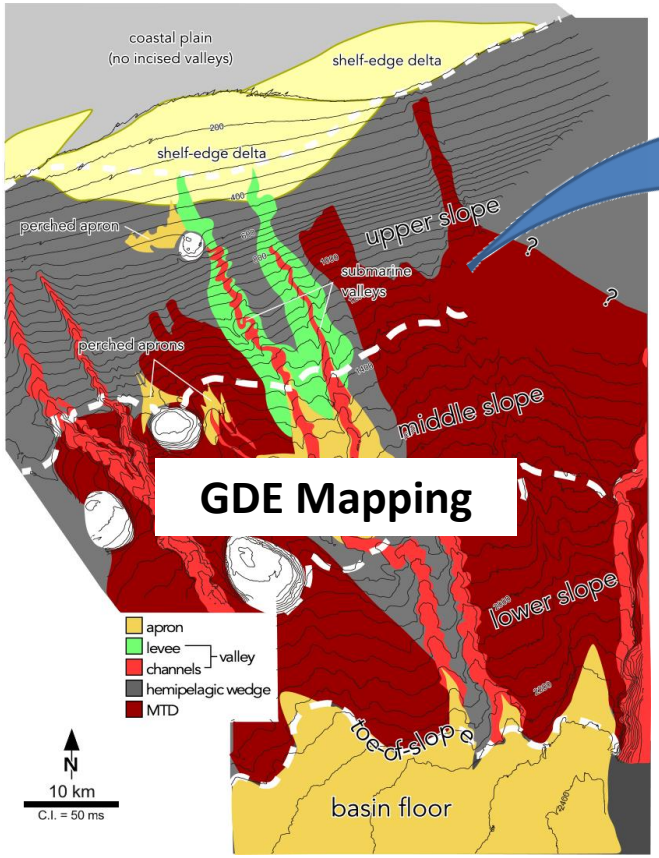
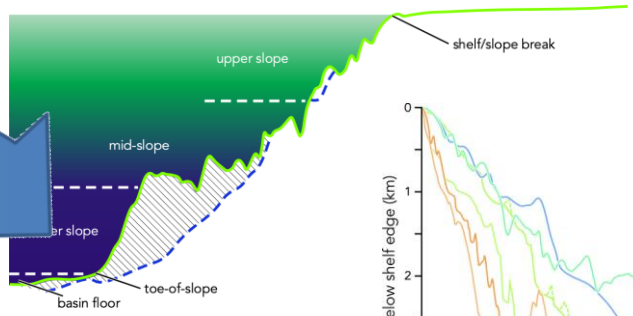
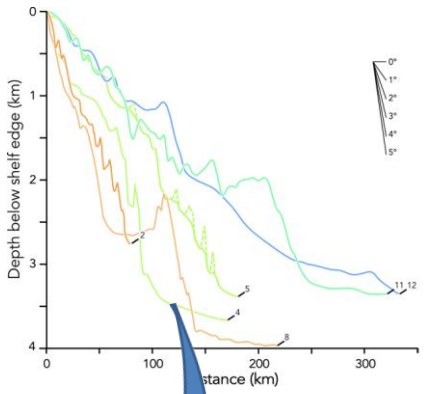
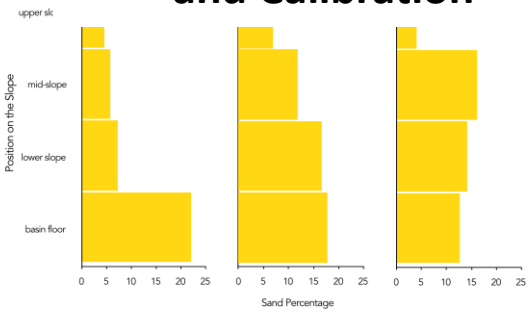


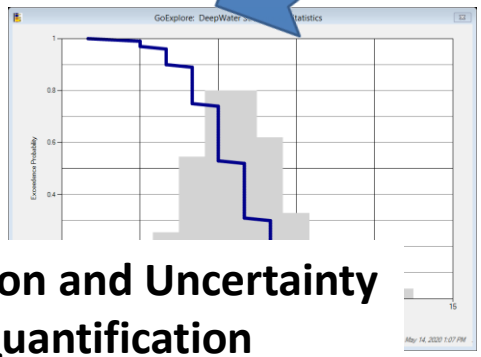
GDE Mapping

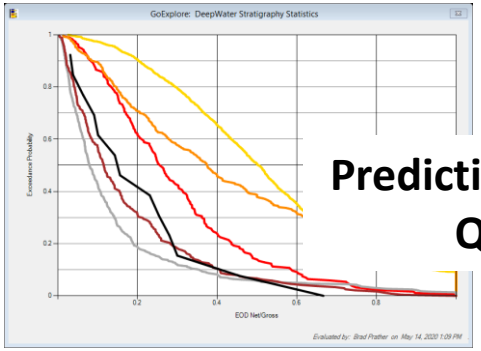




System Characterization and Calibration







Prediction and Uncertainty Quantification

Slope System Characterization & Calibration

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Key Papers:

PRATHER, B.E., O'BYRNE, C., PIRMEZ, C., AND SYLVESTER, Z., 2017, Sediment Partitioning, Continental Slopes and Base-of-slope Systems: Basin Research, v. 29, p. 394-416.doi:10.1111/bre.12190

PRATHER, B.E., 2020, Controls on Reservoir Distribution, Architecture and Stratigraphic Trapping in Slope Settings, *in* Scarselli, N., Adam, J., Chiarella, D., Roberts, D.G., and Bally, A.W., eds., Regional geology and tectonics (2nd edn.), Elsevier B. V., p. 481-515. doi:https://doi.org/10.1016/B978-0-444-64134-2.00025-0

Slope System Characterization & Calibration

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Characterization

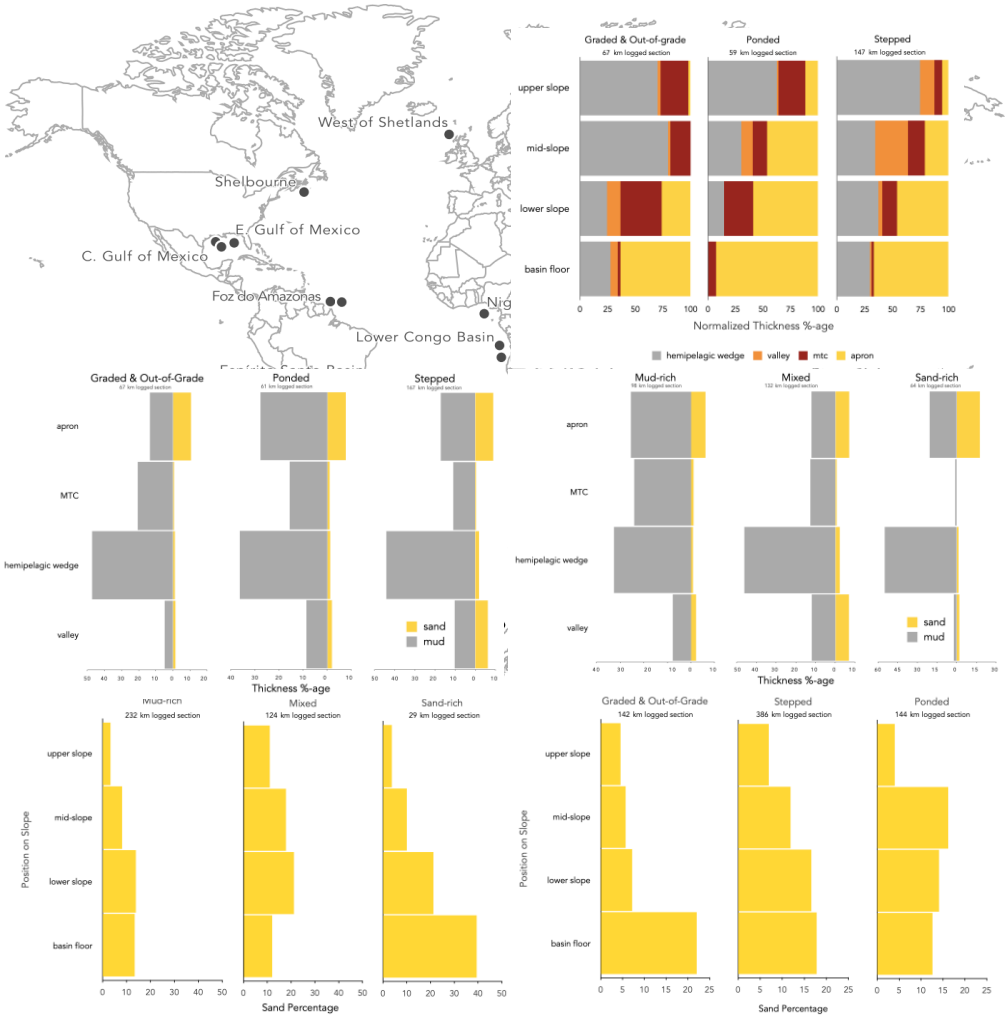
System Net/Gross
- Gross Sediment Calibre

Slope Profile
- Graded
- Stepped above Grade
- Ponded above Grade

Position On Slope
- Upper Slope
- Middle Slope
- Lower Slope
- Basin Floor

Environment of Deposition
- Drape
- MTC
- Hemipelagic Wedge
- Leveed Valley
- Incised Valley
- Apron

Calibration



GoExplore: Deepwater Stratigraphy

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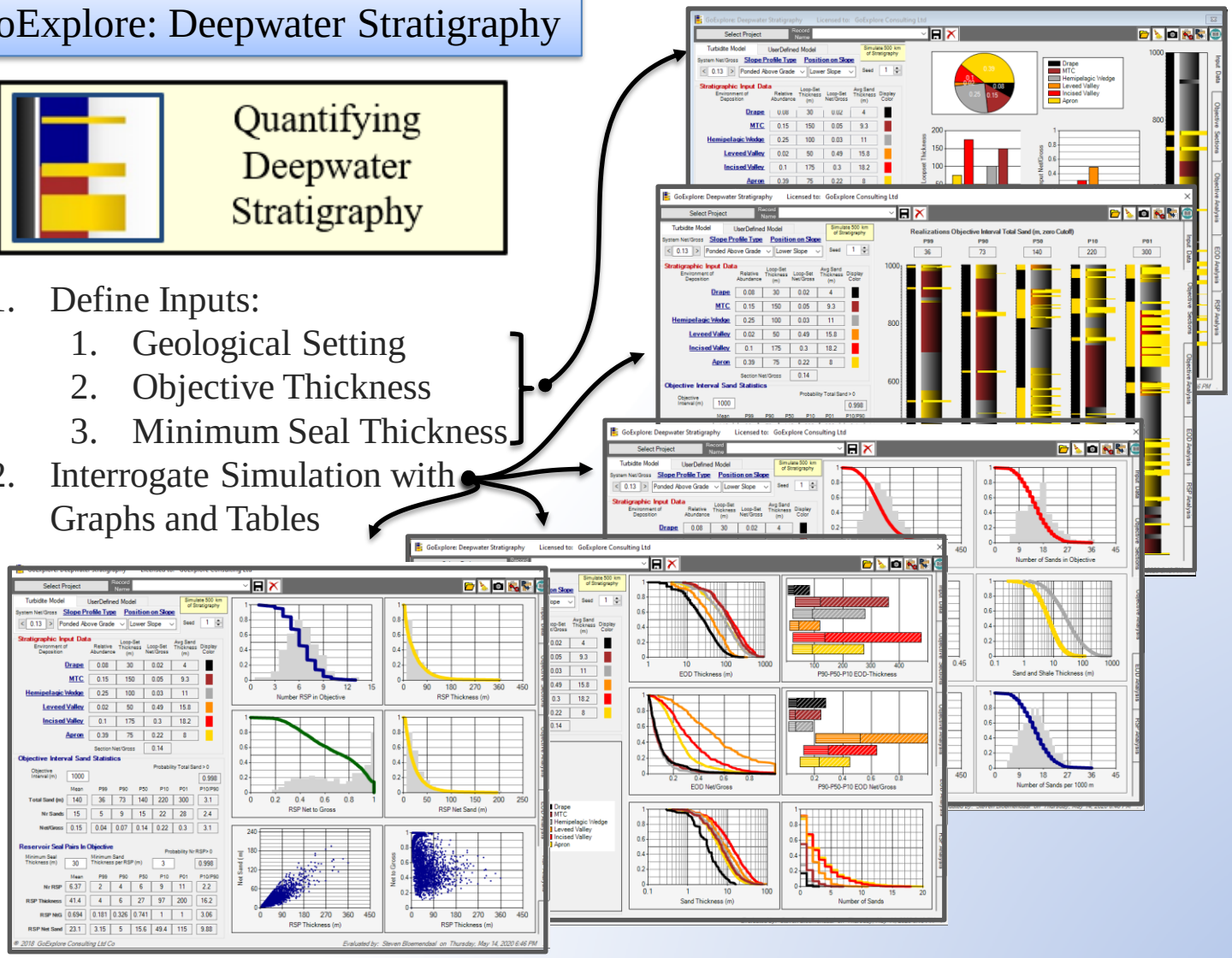
GoExplore: Deepwater Stratigraphy

1. Define Inputs:
    1. Geological Setting
    2. Objective Thickness
    3. Minimum Seal Thickness
2. Interrogate Simulation with Graphs and Tables



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Demo Example: Exploring Deepwater Sabah

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Data from the following Publication

OTC-28398-MS

A Play-Based Evaluation of a Deepwater Sabah Exploration Area: Prospect Maturation and Implications for Remaining Prospectivity

Siti Aishah Abdullah, Steven M. Barker, John Jong, Yoshiaki Watanabe, Dayang Aimi Nuraini Awang Bakar, Mohd. Asraf Khamis, JX Nippon Oil & Gas Exploration (Deepwater Sabah) Limited

We have an opportunity here

and here

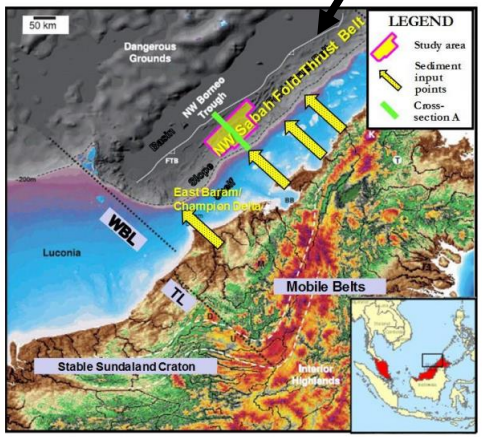


Figure 2: Location map showing the study area located in the southern part of the deepwater NW Sabah fold-thrust belt (modified after Cullen, 2010).

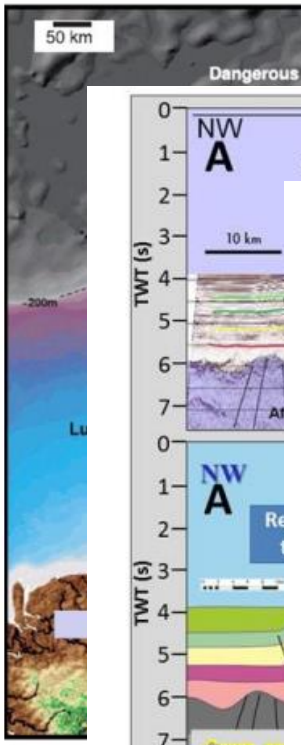


Figure 2: Loca
(modified after

Figure 3: Sabah dee

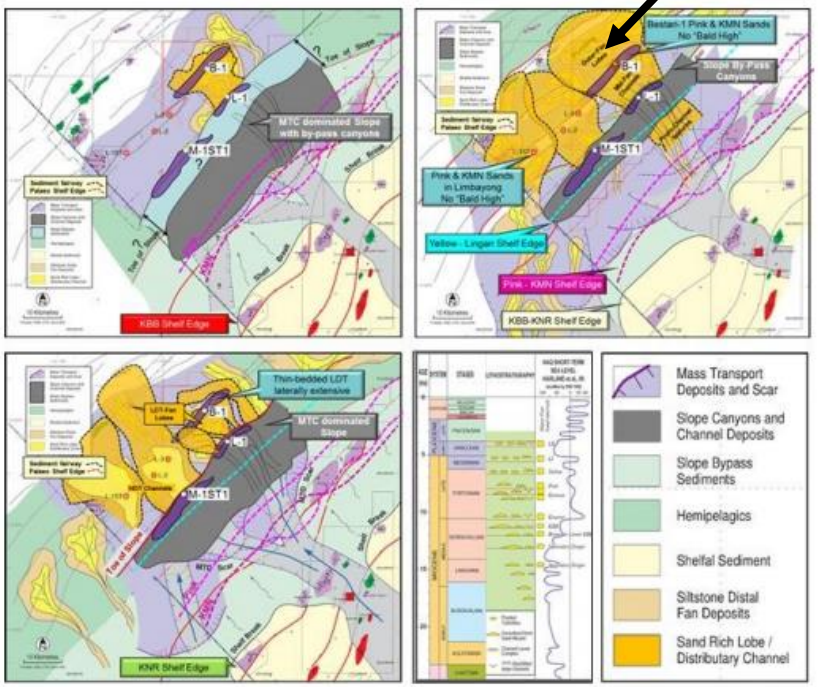
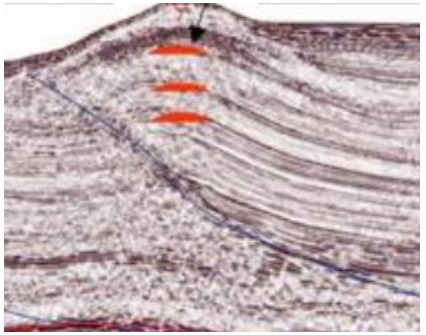


Figure 12: GDE mapping based on well data and seismic attribute integration for key fan intervals (after Jong et al., 2016).

What is the Reservoir and Volume Potential ?



Volumetric Methods

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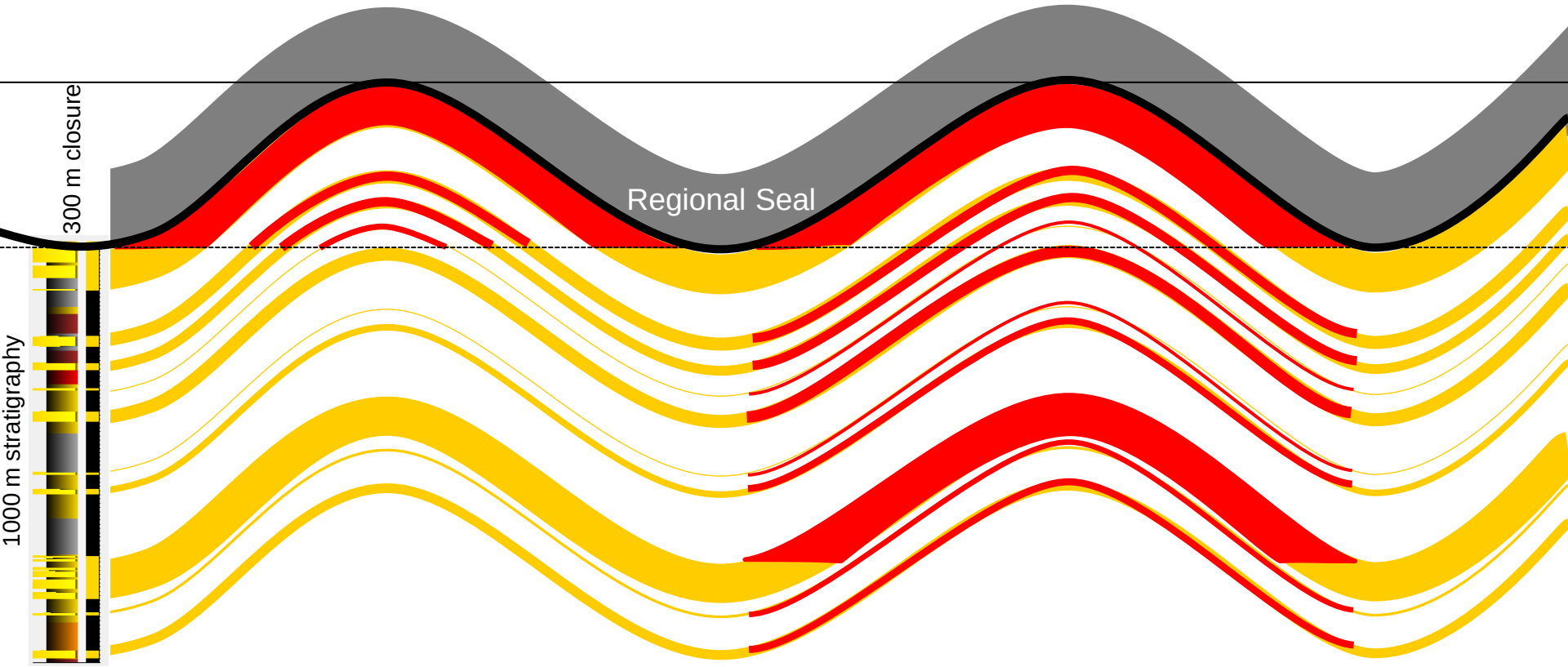
Reservoir below
One Regional Seal

Multiple Reservoir-Seal Pairs
with Intra-formational Seals



Final Slide

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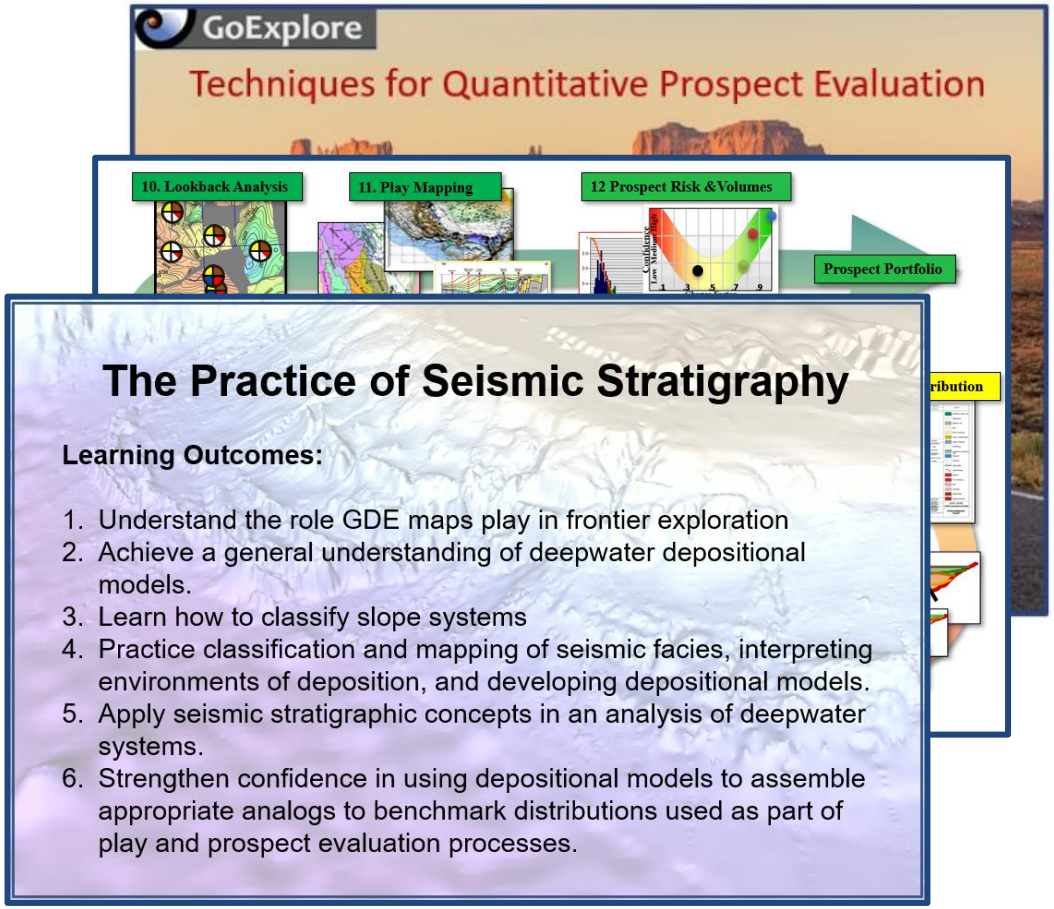
We offer a:

- 3-day course on **Quantitative Prospect Evaluation**
- 3-day or 5-day hands on course on **Play Based Exploration.**
- 3-day course on the **Practice of Seismic Stratigraphy**

  Contact www.carterrageo.com



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Contact: Bloemendaal@GoExplore.Consulting

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Any Questions ?

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Thank You